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#### ADDENDUM NO.4

**TO: ALL PROSPECTIVE BIDDERS**

**SUBJECT: BID NO.: 9695-0/18**

**TITLE: Traffic Poles, Mast Heads, and L.E.D Signals & Housings**

**BID OPENING DATE: Wednesday 10/17/2012**

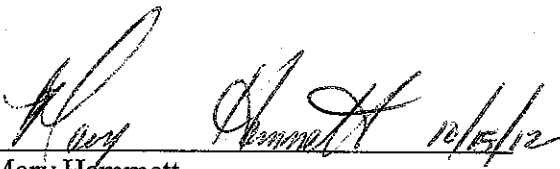
This Addendum is and does become a part of the above mentioned bid.

Please note the following change(s):

The following clarification is being made to Section 2 Special Conditions, Paragraph 2.27 Stock Levels  
Shall Be Maintained by Awarded Bidder

For Group A Traffic Signal Poles, Mast Arms and Street Lights Poles Traffic Poles,  
Mast Arms and all non-standard street light poles (i.e. decorative) will not have to be maintained in stock.

**All terms, covenants and conditions of the subject solicitation and any addenda issued thereto  
shall apply, except to the extent herein amended.**

  
Mary Hammett



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2012 OCT -9 AM 11:04

### ADDENDUM NO.3

**TO: ALL PROSPECTIVE BIDDERS**

**SUBJECT: BID NO.: 9695-0/18**

**TITLE: Traffic Poles, Mast Heads, and L.E.D Signals & Housings**

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**BID OPENING DATE: 10/17/2012**

This Addendum is and does become a part of the above mentioned bid.

Please note the following change(s):

1. Section 4, of the Invitation to Bid Package, Group B page No. 67 is being replaced in its entirety with page No.67-A.
2. Question: Will the County be responsible for the installation?  
Answer: Yes

**All terms, covenants and conditions of the subject solicitation and any addenda issued thereto shall apply, except to the extent herein amended.**

  
Mary Hammett

## Group B: L.E.D. Pedestrian Signals & Housing

As Identified In L.E.D. Pedestrian Signal Hand/Person Module

Item:	Est. Quantity:	Description:	Unit Price:
3	2,500	L.E.D. Countdown Signals Modules Only Dialight Model #430-6479-001F or Approved Equal	\$ _____ Each
		Model# _____	
4	750	L.E. D Countdown Signals Modules Dialight Model #430-6479-001F Complete with Housing or Approved Equal	\$ _____ Each
		Model# _____	



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2012 OCT -3 AM 11:14

## ADDENDUM NO. 2

**TO: All Vendors**

**SUBJECT: BID NO.: 9695-0/18**

**TITLE: Traffic Poles, Mast Heads, and L.E.D Signals & Housings**


**BID OPENING DATE: 10/17/2012**

This Addendum is and does become a part of the above mentioned bid.

Please note the following change(s):

Section 4, of the Proposal Package, Group B Item No. 1, Item No 2 and Appendix A is being deleted.

All terms, covenants and conditions of the subject solicitation and any addenda issued thereto shall apply, except to the extent herein amended.

  
Mary Hammett



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DEPT OF PROCUREMENT MGMT

2012 OCT -2 AM 8:35

**ADDENDUM NO. 1**

**TO: All Vendors**

**SUBJECT: BID NO.: 9695-0/18**

**TITLE: Traffic Poles, Mast Heads, and L.E.D Signals & Housings**

**BID OPENING DATE: 10/17/2012**

This Addendum is and does become a part of the above mentioned bid.

Please note the following change(s):

Section 4, of the Proposal Package, Group B Item No. 4 Description has been corrected to read:

L.E.D Countdown Signals Modules Dialight Modules (Dialight Model#430-6479-0001F) Complete with Housing or Approved Equal

**All terms, covenants and conditions of the subject solicitation and any addenda issued thereto shall apply, except to the extent herein amended.**

A handwritten signature in cursive script, reading "Ralph J. Hammett", followed by the date "10/12/12". The signature is written over a horizontal line.

**BID NO.: 9695-0/18**

**OPENING: 2:00 P.M.  
Wednesday  
October 17, 2012**

**MIAMI-DADE COUNTY, FLORIDA**

**I N V I T A T I O N  
T O B I D**

**TITLE:**

**Traffic Poles, Mast Heads, and L.E.D Signals & Housings**

**THE FOLLOWING ARE REQUIREMENTS OF THIS BID, AS NOTED BELOW:**

<b>SMALL BUSINESS ENTERPRISE MEASURE:.....</b>	<b>See Section 2 Paragraph 2.2</b>
<b>INFORMATION SHEET.....</b>	<b>See Section 2 Paragraph 2.25</b>
<b>SAMPLES/INFORMATION SHEETS:.....</b>	<b>See Section 2 Paragraph 2.9</b>
<b>USER ACCESS PROGRAM:.....</b>	<b>See Section 2 Paragraph 2.21</b>
<b>WRITTEN WARRANTY: .....</b>	<b>See Section 2 Paragraph 2.19</b>

**FOR INFORMATION CONTACT:**

**Mary Hammett, 305-375-5471, mhammet@miamidade.gov**

**IMPORTANT NOTICE TO BIDDERS:**

- READ THIS ENTIRE DOCUMENT AND HANDLE ALL QUESTIONS IN ACCORDANCE WITH SECTION 1, PARAGRAPH 1.2(D).**
- FAILURE TO COMPLETE THE CERTIFICATION REGARDING LOCAL PREFERENCE ON BID SUBMITTAL FORM IN SECTION 4 SHALL RENDER THE AWARDED BIDDER INELIGIBLE FOR LOCAL PREFERENCE**
- FAILURE TO SIGN BID SUBMITTAL FORM IN SECTION 4 WILL RENDER YOUR BID NON-RESPONSIVE**



**MIAMI-DADE COUNTY, FLORIDA**

**INVITATION TO BID**

**Bid Number: 9695-0/18**

**Bid Title: Traffic Poles, Mast Heads, and L.E.D. Signals & Housings**

**Procurement Associate: Mary Hammett**

**Bids will be accepted until 2:00 p.m. on Wednesday, October 17, 2012**

**Bids will be publicly opened.** The County provides equal access and does not discriminate on the basis of disability in its programs or services. It is our policy to make all communication available to the public, including those who may be visually or hearing impaired. If you require information in a non-traditional format please call 305-375-5278.

**Instructions:** The Clerk of the Board business hours are 8:00am to 4:30pm, Monday through Friday. Additionally, the Clerk of the Board is closed on holidays observed by the County. Each Bid submitted to the Clerk of the Board shall have the following information clearly marked on the face of the envelope: the Awarded bidders name, return address, Bid number, opening date of the Bid and the title of the Bid. Included in the envelope shall be an original and two copies of the Bid Submittal, plus attachments if applicable.

**All Bids received time and date stamped by the Clerk of the Board prior to the bid submittal deadline shall be accepted as timely submitted. The circumstances surrounding all bids received and time stamped by the Clerk of the Board after the bid submittal deadline will be evaluated by the procuring department, in consultation with the County Attorney's Office, to determine whether the bid will be accepted as timely.**

**NOTICE TO ALL AWARDED BIDDERS:**

- **FAILURE TO SIGN THE BID SUBMITTAL FORM WILL RENDER YOUR BID NON-RESPONSIVE.**
- **THE BID SUBMITTAL FORM CONTAINS IMPORTANT CERTIFICATIONS THAT REQUIRE REVIEW AND COMPLETION BY ANY AWARDED BIDDER RESPONDING TO THIS SOLICITATION.**

**SECTION 1**  
**GENERAL TERMS AND CONDITIONS**

**1.1. DEFINITIONS**

**Bid** – shall refer to any offer(s) submitted in response to this solicitation.

**Bidder** – shall refer to anyone submitting a Bid in response to this solicitation.

**Bid Solicitation** – shall mean this solicitation documentation, including any and all addenda.

**Bid Submittal Form** – defines the requirement of items to be purchased, and must be completed and submitted with Bid. The Bidder should indicate its name in the appropriate space on each page.

**County** – shall refer to Miami-Dade County, Florida

**ISD/PM** – shall refer to Miami-Dade County's Internal Services Department, Procurement Management Division.

**Enrolled Vendor** – shall refer to a firm that has completed the necessary documentation in order to receive Bid notifications from the County.

**Registered Vendor** – shall refer to a firm that has completed the Miami-Dade County Business Entity Registration Application and has satisfied all requirements to enter into business agreements with the County.

**The Vendor Registration Package** – shall refer to the Business Entity Registration Application.

For additional information about on-line vendor enrollment or vendor registration contact the Vendor Assistance Unit at 111 N.W. 1<sup>st</sup> Street, 13<sup>th</sup> Floor, Miami, FL 33128, Phone 305-375-5773. Vendors can enroll online and obtain forms to register by visiting our web site at [www.miamidade.gov/ISD/PM](http://www.miamidade.gov/ISD/PM)

**1.2. INSTRUCTIONS TO BIDDERS**

**A. Bidder Qualification**

It is the policy of the County to encourage full and open competition among all available qualified vendors. All vendors regularly engaged in the type of work specified in the Bid Solicitation are encouraged to submit Bids. Vendors may enroll with the County to be included on a notification list for selected categories of goods and services. To be eligible for award of a contract (including small purchase orders), Bidders must become a Registered Vendor. Only Registered Vendors can be awarded County contracts. Vendors are required to register with the County by contacting the Vendor Assistance Unit. The County endeavors to obtain the participation of all qualified small business enterprises. For information and to apply for certification, contact the Department of Small Business Development at 111 N.W. 1<sup>st</sup> Street, 19<sup>th</sup> Floor, Miami, FL 33128-1900, or telephone at 305-375-3111. County employees and board members wishing to do business with the County are referred to Section 2-11.1 of the Miami-Dade County Code relating to Conflict of Interest and Code of Ethics.

**B. Vendor Registration**

To be recommended for award the County requires that vendors complete a Miami-Dade County Vendor Registration Package. Effective June 1, 2008, a new Vendor Registration Package, including a Uniform Affidavit Packet (Affidavit form), must be completed by vendors and returned to the Internal Services Department, Procurement Management Division (ISD/PM), Vendor Assistance Unit, within fourteen (14) days of notification of the intent to recommend for award. In the event the Vendor Registration Package is not properly completed and returned within the specified time, the County may in its sole discretion, award to the next lowest responsive, responsible Bidder. The Bidder is responsible for obtaining the Vendor Registration Package, including all affidavits by downloading from the ISD/PM website at [www.miamidade.gov](http://www.miamidade.gov) or from the Vendor Assistance Unit at 111 N.W. 1<sup>st</sup> Street, 13<sup>th</sup> Floor, Miami, FL 33128. Bidders are required to affirm that all information submitted with the Vendor Registration Package is current, complete and accurate, at the time they submit a response to a Bid Solicitation, by completing the provided Affirmation of Vendor Affidavit form. In becoming a Registered Vendor with Miami-Dade County, the vendor confirms its knowledge of and commitment to comply with the following:

1. *Miami-Dade County Ownership Disclosure Affidavit* (Sec. 2-8.1 of the County Code)

2. *Miami-Dade County Employment Disclosure Affidavit* (County Ordinance No. 90-133, amending Section 2-8.1(c)(2) of the County Code)
3. *Miami-Dade County Employment Drug-Free Workplace Certification* (Section 2-8.1.2(b) of the County Code)
4. *Miami-Dade Disability and Nondiscrimination Affidavit* (Article 1, Section 2-8.1.5 Resolution R182-00 Amending R-385-95)
5. *Miami-Dade County Debarment Disclosure Affidavit* (Section 10.38 of the County Code)
6. *Miami-Dade County Vendor Obligation to County Affidavit* (Section 2-8.1 of the County Code)
7. *Miami-Dade County Code of Business Ethics Affidavit* (Article 1, Section 2-3.1(f) and 2-11.6(1) of the County Code through (c) and (d) of the County Code and County Ordinance No. 00-1 amending Section 2-11.1(c) of the County Code)
8. *Miami-Dade County Family Leave Affidavit* (Article V of Chapter 11 of the County Code)
9. *Miami-Dade County Living Wage Affidavit* (Section 2-8.8 of the County Code)
10. *Miami-Dade County Domestic Leave and Reporting Affidavit* (Article 8, Section 11A-60 11A-67 of the County Code)
11. *Subcontracting Practices* (Ordinance 97-35)
12. *Subcontractor/Supplier Listing* (Ordinance 97-104)
13. *Environmentally Acceptable Packaging Resolution* (R-738-92)
14. *W-9 and 8109 Forms*  
The vendor must furnish these forms as required by the Internal Revenue Service.
15. *Social Security Number*  
In order to establish a file for your firm, you must provide your firm's Federal Employer Identification Number (FEIN). If no FEIN exists, the Social Security Number of the owner or individual must be provided. This number becomes your "County Vendor Number". To comply with Section 119.071(5) of the Florida Statutes relating to the collection of an individual's Social Security Number, be aware that ISD/PM requests the Social Security Number for the following purposes:
  - Identification of individual account records
  - To make payments to individual/vendor for goods and services provided to Miami-Dade County
  - Tax reporting purposes
  - To provide a unique identifier in the vendor database that may be used for searching and sorting departmental records
16. *Office of the Inspector General*  
Pursuant to Section 2-1076 of the County Code.
17. *Small Business Enterprises*  
The County endeavors to obtain the participation of all small business enterprises pursuant to Sections 2-8.2, 2-8.2.3 and 2-8.2.4 of the County Code and Title 45 of the Code of Federal Regulations.
18. *Antitrust Laws*  
By acceptance of any contract, the vendor agrees to comply with all antitrust laws of the United States and the State of Florida.



## SECTION 1 GENERAL TERMS AND CONDITIONS

### C. PUBLIC ENTITY CRIMES

Pursuant to Section 287.133(2)(a) of the Florida Statutes, a person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a Bid on a contract to provide any goods or services to a public entity, may not submit a Bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit Bids on leases of real property to a public entity, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017 of the Florida Statutes, for CATEGORY TWO for a period of 36 months from the date of being placed on the convicted vendor list.

### D. Request for Additional Information

1. Pursuant to Section 2-11.1(f) of the County Code, all Bid Solicitations, once advertised and until an award recommendation has been forwarded to the appropriate authority are under the "Code of Silence". Any communication or inquiries, except for clarification of process or procedure already contained in the solicitation, are to be made in writing to the attention of the Procurement Agent identified on the front page of the solicitation. Such inquiries or request for information shall be submitted to the procurement agent in writing and shall contain the requestor's name, address, and telephone number. If transmitted by facsimile, the request should also include a cover sheet with Bidder's facsimile number. The requestor must also file a copy of this written request with the Clerk of the Board, 111 NW 1<sup>st</sup> Street, 17<sup>th</sup> Floor, suite 202, Miami, Florida 33128-1933 or email [clerk@mc.miamidade.gov](mailto:clerk@mc.miamidade.gov).
2. The Internal Services Department, Procurement Management Division may issue an addendum in response to any inquiry received, prior to Bid opening, which changes, adds to or clarifies the terms, provisions or requirements of the solicitation. The Bidder should not rely on any representation, statement or explanation whether written or verbal, other than those made in this Bid Solicitation document or in any addenda issued. Where there appears to be a conflict between this Bid Solicitation and any addenda, the last addendum issued shall prevail.
3. It is the Bidder's responsibility to ensure receipt of all addenda, and any accompanying documentation. The Bidder is required to submit with its Bid a signed "Acknowledgment of Addenda" form, when any addenda have been issued.

### E. Contents of Bid Solicitation and Bidders' Responsibilities

1. It is the responsibility of the Bidder to become thoroughly familiar with the Bid requirements, terms and conditions of this solicitation. Pleas of ignorance by the Bidder of conditions that exist or that may exist will not be accepted as a basis for varying the requirements of the County, or the compensation to be paid to the Bidder.
2. In the event a Bidder wishes to protest any part of the General Conditions, Special Conditions and/or Technical Specifications contained in the Bid Solicitation it must file a notice of protest in writing with the issuing department no later than 48 hours prior to the Bid opening date and hour specified in the solicitation. Failure to file a timely notice of protest will constitute a waiver of proceedings.
3. This solicitation is subject to all legal requirements contained in the applicable County Ordinances, Administrative Orders, and Resolutions, as well as all applicable State and Federal Statutes. Where conflict exists between this Bid Solicitation and these legal requirements, the authority shall prevail in the following order: Federal, State and local.
4. It is the responsibility of the Bidder/Proposer, prior to conducting any lobbying regarding this solicitation to file the appropriate form with the Clerk of the Board stating that a particular lobbyist is authorized to represent the Bidder/Proposer. The Bidder/Proposer shall also file a form with the Clerk of the Board at the point in time at which a lobbyist is no longer authorized to represent said Bidder/Proposer. Failure of a Bidder/Proposer to file the appropriate form required, in relation to such solicitation, may be considered as evidence that the Bidder/Proposer is not a responsible contractor.

### F. Change or Withdrawal of Bids

1. Changes to Bid - Prior to the scheduled Bid opening a Bidder may change its Bid by submitting a new Bid, (as indicated on the cover

page) with a letter in writing on the firms letterhead, signed by an authorized agent stating that the new submittal replaces the original submittal. The new submittal shall contain the letter and all information as required for submitting the original Bid. No changes to a Bid will be accepted after the Bid has been opened.

2. Withdrawal of Bid - A Bid shall be irrevocable unless the Bid is withdrawn as provided herein. Only a written letter received by ISD/PM prior to the Bid opening date may withdraw a bid. A bid may also be withdrawn ninety (90) days after the Bid has been opened and prior to award, by submitting a letter to the contact person identified on the front cover of this Bid Solicitation. The withdrawal letter must be on company letterhead and signed by an authorized agent of the Bidder.

### G. Conflicts Within The Bid Solicitation

Where there appears to be a conflict between the General Terms and Conditions, Special Conditions, the Technical Specifications, the Bid Submittal Section, or any addendum issued, the order of precedence shall be: the last addendum issued, the Bid Submittal Section, the Technical Specifications, the Special Conditions, and then the General Terms and Conditions.

### H. Prompt Payment Terms

1. It is the policy of Miami-Dade County that payment for all purchases by County agencies and the Public Health Trust shall be made in a timely manner and that interest payments be made on late payments. In accordance with Florida Statutes, Section 218.74 and Section 2-3.1.4 of the Miami-Dade County Code, the time at which payment shall be due from the County or the Public Health Trust shall be forty-five (45) days from receipt of a proper invoice. The time at which payment shall be due to small businesses shall be thirty (30) days from receipt of a proper invoice. All payments due from the County or the Public Health Trust, and not made within the time specified by this section, shall bear interest from thirty (30) days after the due date at the rate of one percent (1%) per month on the unpaid balances. Further, proceedings to resolve disputes for payment of obligations shall be concluded by final written decision of the County Mayor, or his or her designee(s), not later than sixty (60) days after the date on which the proper invoice was received by the County or the Public Health Trust.
2. The Bidder may offer cash discounts for prompt payments; however, such discounts will not be considered in determining the lowest price during bid evaluation. Bidders are requested to provide prompt payment terms in the space provided on the Bid submittal signature page of the solicitation.

### I. Accounts Receivable Adjustments

In accordance with Miami-Dade County implementing Order 3-9, Accounts Receivable Adjustments, if money is owed by the Contractor to the County, whether under this Contract or for any other purpose, the County reserves the right to retain such amount from payment due by County to the Contractor under this Contract. Such retained amount shall be applied to the amount owed by the Contractor to the County. The Contractor shall have no further claim to such retained amounts which shall be deemed full accord and satisfaction of the amount due by the County to the Contractor for the applicable payment due herein.

### 1.3. PREPARATION OF BIDS

- A. The Bid submittal form defines requirements of items to be purchased, and must be completed and submitted with the Bid. Use of any other form will result in the rejection of the Bidder's offer.
- B. The Bid submittal form must be legible. Bidders shall use typewriter, computer or ink. All changes must be crossed out and initialed in ink. Failure to comply with these requirements may cause the Bid to be rejected.
- C. An authorized agent of the Bidder's firm must sign the Bid submittal form. **FAILURE TO SIGN THE BID SUBMITTAL FORM SHALL RENDER THE BID NON-RESPONSIVE.**
- D. The Bidder may be considered non-responsive if bids are conditioned to modifications, changes, or revisions to the terms and conditions of this solicitation.
- E. The Bidder may submit alternate Bid(s) for the same solicitation provided that such offer is allowable under the terms and conditions. The alternate Bid must meet or exceed the minimum

## SECTION 1

### GENERAL TERMS AND CONDITIONS

requirements and be submitted on a separate Bid submittal marked "Alternate Bid".

- F. When there is a discrepancy between the unit prices and any extended prices, the unit prices will prevail.
- G. An optional electronic submittal shall not be considered a part of the bid if it differs in any respect from the required manual submittal in the original hard copy.

#### 1.4. CANCELLATION OF BID SOLICITATION

Miami-Dade County reserves the right to cancel, in whole or in part, any invitation to bid when it is in the best interest of the County.

#### 1.5. AWARD OF BID SOLICITATION

- A. This Bid may be awarded to the responsible Bidder meeting all requirements as set forth in the solicitation. The County reserves the right to reject any and all Bids, to waive irregularities or technicalities and to re-advertise for all or any part of this Bid Solicitation as deemed in its best interest. The County shall be the sole judge of its best interest.
- B. When there are multiple line items in a solicitation, the County reserves the right to award on an individual item basis, any combination of items, total low bid or in whichever manner deemed in the best interest of the County.
- C. The County reserves the right to reject any and all Bids if it is determined that prices are excessive, best offers are determined to be unreasonable, or it is otherwise determined to be in the County's best interest to do so.
- D. The County reserves the right to negotiate prices with the low bidder, provided that the scope of work of this solicitation remains the same.
- E. Award of this Bid Solicitation will only be made to firms that have completed the Miami-Dade County Business Entity Registration Application and that satisfy all necessary legal requirements to do business with Miami-Dade County. Firms domiciled in Miami-Dade County must present a copy of their Miami-Dade County issued Local Business Tax Receipt.
- F. Pursuant to County Code Section 2-9.1(g), the Bidder's performance as a prime contractor or subcontractor on previous County contracts shall be taken into account in evaluating the Bid received for this Bid Solicitation.
- G. To obtain a copy of the Bid Solicitation, Bidders shall enclose an appropriately sized self-addressed stamped envelope or make a request by e-mail. Bid results will not be given by telephone or facsimile.
- H. The Bid Solicitation, any addenda and/or properly executed modifications, the purchase order, and any change order(s) shall constitute the contract.
- I. In accordance with Resolution R-1574-98, the Director of ISD/FM will decide all tie Bids.
- J. Award of this Bid may be predicated on compliance with and submittal of all required documents as stipulated in the Bid Solicitation.
- K. The County reserves the right to request and evaluate additional information from any bidder after the submission deadline as the County deems necessary.

#### 1.6. CONTRACT EXTENSION

- A. The County reserves the right to exercise its option to extend a contract for up to one hundred-eighty (180) calendar days beyond the current contract period and will notify the contractor in writing of the extension.
- B. This contract may be extended beyond the initial one hundred-eighty (180) day extension period upon mutual agreement between the County and the successful Bidder(s) upon approval by the Board of County Commissioners.

#### 1.7. WARRANTY

All warranties express and implied, shall be made available to the County for goods and services covered by this Bid Solicitation. All goods furnished shall be fully guaranteed by the successful Bidder against factory defects and workmanship. At no expense to the County, the successful Bidder shall correct any and all apparent and latent defects that may occur within the manufacturer's standard warranty. The Special Conditions of the Bid Solicitation may supersede the manufacturer's standard warranty.

#### 1.8. ESTIMATED QUANTITIES

Estimated quantities or dollars are for Bidder's guidance only: (a) estimates are based on the County's anticipated needs and/or usage during a previous contract period and; (b) the County may use these estimates to determine the low Bidder. Estimated quantities do not contemplate or include possible additional quantities that may be ordered by other government, quasi-government or non-profit entities utilizing this contract under the Joint Purchase portion of the County User Access Program (UAP) described in Section 2.21 of this contract solicitation and the resulting contract. If that section is present in this solicitation document. No guarantee is expressed or implied as to quantities or dollars that will be used during the contract period. The County is not obligated to place any order for the given amount subsequent to the award of this Bid Solicitation.

#### 1.9. NON-EXCLUSIVITY

It is the intent of the County to enter into an agreement with the successful Bidder that will satisfy its needs as describe herein. However, the County reserves the right as deemed in its best interest to perform, or cause to be performed, the work and services, or any portion thereof, herein described in any manner it sees fit, including but not limited to: award of other contracts, use of any contractor, or perform the work with its own employees.

#### 1.10. LOCAL PREFERENCE

The evaluation of competitive bids is subject to Section 2-9.5 of the Miami-Dade County Code, which, except where contrary to federal and state law, or any other funding source requirements, provides that preference be given to local businesses. A local business shall be defined as:

1. a business that has a valid Local Business Tax Receipt, issued by Miami-Dade County at least one year prior to bid or proposal submission, that is appropriate for the goods, services or construction to be purchased;
2. a business that has physical business address located within the limits of Miami-Dade County from which the vendor operates or performs business. Post Office Boxes are not verifiable and shall not be used for the purpose of establishing said physical address; and
3. a business that contributes to the economic development and well-being of Miami-Dade County in a verifiable and measurable way. This may include but not be limited to the retention and expansion of employment opportunities and the support and increase in the County's tax base. To satisfy this requirement, the vendor shall affirm in writing its compliance with either of the following objective criteria as of the bid or proposal submission date stated in the solicitation:
  - (a) vendor has at least ten (10) permanent full time employees, or part time employees equivalent to 10 FTE ("full-time equivalent" employees working 40 hours per week) that live in Miami-Dade County, or at least 25% of its employees that live in Miami-Dade County, or
  - (b) vendor contributes to the County's tax base by paying either real property taxes or tangible personal property taxes to Miami-Dade County, or
  - (c) some other verifiable and measurable contribution to the economic development and well-being of Miami-Dade County.

When there is a responsive bid from a Miami-Dade local business within 10% of the lowest price submitted by a responsive non-local business, the local business and the non-local low bidder shall have the opportunity to submit a best and final bid equal to or lower than the amount of the low bid previously submitted by the non-local business.

At this time, there is an interlocal agreement in effect between Miami-Dade and Broward Counties until September 2012, therefore, a vendor which meets the requirements of (1), (2) and (3) above for Broward County shall be considered a local business pursuant to this Section.

#### 1.11. CONTINUATION OF WORK

Any work that commences prior to and will extend beyond the

## SECTION 1 GENERAL TERMS AND CONDITIONS

expiration date of the current contract period shall, unless terminated by mutual written agreement between the County and the successful Bidder, continue until completion at the same prices, terms and conditions.

### 1.12. BID PROTEST

A recommendation for contract award or rejection of award may be protested by a Bidder in accordance with the procedures contained in Sections 2-8.3 and 2-8.4 of the County Code, as amended, and as established in Administrative Order No. 3-21.

### 1.13. LAWS AND REGULATIONS

The successful Bidder shall comply with all laws and regulations applicable to provide the goods and/or services specified in this Bid Solicitation. The Bidder shall comply with all federal, state and local laws that may affect the goods and/or services offered.

### 1.14. LICENSES, PERMITS AND FEES

The awarded bidder(s) shall hold all licenses and/or certifications, obtain and pay for all permits and/or inspections, and comply with all laws, ordinances, regulations and building code requirements applicable to the work required herein. Damages, penalties, and/or fines imposed on the County or an awarded bidder for failure to obtain and maintain required licenses, certifications, permits and/or inspections shall be borne by said awarded bidder.

### 1.15. SUBCONTRACTING

Unless otherwise specified in this Bid Solicitation, the successful Bidder shall not subcontract any portion of the work without the prior written consent of the County. The ability to subcontract may be further limited by the Special Conditions. Subcontracting without the prior consent of the County may result in termination of the contract for default. When Subcontracting is allowed the Bidder shall comply with County Resolution No. 1634-93, Section 10-34 of the County Code and County Ordinance No. 97-35.

### 1.16. ASSIGNMENT

The successful Bidder shall not assign, transfer, hypothecate, or otherwise dispose of this contract, including any rights, title or interest therein, or its power to execute such contract to any person, company or corporation without the prior written consent of the County.

### 1.17. DELIVERY

Unless otherwise specified in the Bid Solicitation, prices quoted shall be F.O.B. Destination. Freight shall be included in the proposed price.

### 1.18. RESPONSIBILITY AS EMPLOYER

The employee(s) of the successful Bidder shall be considered to be at all times its employee(s), and not an employee(s) or agent(s) of the County or any of its departments. The successful Bidder shall provide competent and physically employee(s) capable of performing the work as required. The County may require the successful Bidder to remove any employee it deems unacceptable. All employees of the successful Bidder shall wear proper identification.

### 1.19. INDEMNIFICATION

The successful Bidder shall indemnify and hold harmless the County and its officers, employees, agents and instrumentalities from any and all liability, losses or damages, including attorney's fees and costs of defense, which the County or its officers, employees, agents or instrumentalities may incur as a result of claims, demands, suits, causes of actions or proceedings of any kind or nature arising out of, relating to or resulting from the performance of the agreement by the successful Bidder or its employees, agents, servants, partners, principals or subcontractors. The successful Bidder shall pay all claims and losses in connection therewith, and shall investigate and defend all claims, suits or actions of any kind or nature in the name of the County, where applicable, including appellate proceedings, and shall pay all costs, judgments, and attorney's fees which may be incurred thereon. The successful Bidder expressly understands and agrees that any insurance protection required by this Agreement or otherwise provided by the successful Bidder shall in no way limit the responsibility to indemnify, keep and save harmless and defend the County or its officers, employees, agents and instrumentalities as herein provided.

### 1.20. COLLUSION

A contractor recommended for award as the result of a competitive solicitation for any County purchases of supplies, materials and services (including professional services, other than professional architectural, engineering and other services subject to Sec. 2-10.4 and Sec. 2-87.055 Fla. Stats.), purchase, lease, permit, concession or management agreement shall, within five (5) business days of the filing of such recommendation, submit an affidavit under the penalty of perjury, on a form provided by the County, stating either that the contractor is not related to any of the other parties bidding in the competitive solicitation or identifying all related parties, as defined in this Section, which bid in the solicitation; and attesting that the contractor's proposal is genuine and not sham or collusive or made in the interest or on behalf of any person not therein named, and that the contractor has not, directly or indirectly, induced or solicited any other proposer to put in a sham proposal, or any other person, firm, or corporation to refrain from proposing, and that the proposer has not in any manner sought by collusion to secure to the proposer an advantage over any other proposer. In the event a recommended contractor identifies related parties in the competitive solicitation its bid shall be presumed to be collusive and the recommended contractor shall be ineligible for award unless that presumption is rebutted in accordance with the provisions of Sec. 2-8.1.1. Any person or entity that fails to submit the required affidavit shall be ineligible for contract award.

- A. The Collusion Affidavit will be included in all solicitations and will be requested from bidders/proposers once bids/proposals are received and evaluated.
- B. Failure to provide a Collusion Affidavit within 5 business days after the recommendation to award has been filed with the Clerk of the Board shall be cause for the contractor to forfeit their bid bond.

### 1.21. MODIFICATION OF CONTRACT

The contract may be modified by mutual consent, in writing through the issuance of a modification to the contract, purchase order, change order or award sheet, as appropriate.

### 1.22. TERMINATION FOR CONVENIENCE

The County, at its sole discretion, reserves the right to terminate this contract without cause upon thirty (30) days written notice. Upon receipt of such notice, the successful Bidder shall not incur any additional costs under this contract. The County shall be liable only for reasonable costs incurred by the successful Bidder prior to notice of termination. The County shall be the sole judge of "reasonable costs."

### 1.23. TERMINATION FOR DEFAULT

The County reserves the right to terminate this contract, in part or in whole, or place the vendor on probation in the event the successful Bidder fails to perform in accordance with the terms and conditions stated herein. The County further reserves the right to suspend or debar the successful Bidder in accordance with the appropriate County ordinances, resolutions and/or administrative orders. The vendor will be notified by letter of the County's intent to terminate. In the event of termination for default, the County may procure the required goods and/or services from any source and use any method deemed in its best interest. All re-procurement cost shall be borne by the successful Bidder.

### 1.24. FRAUD AND MISREPRESENTATION

Pursuant to Section 2-8.4.1 of the Miami-Dade County Code, any individual, corporation or other entity that attempts to meet its contractual obligations with the County through fraud, misrepresentation or material misstatement, may be debarred for up to five (5) years. The County as a further sanction may terminate or cancel any other contracts with such individual, corporation or entity. Such individual or entity shall be responsible for all direct or indirect costs associated with termination or cancellation, including attorney's fees.

### 1.25. ACCESS TO RECORDS

The County reserves the right to require the Contractor to submit to an audit by Audit and Management Services, the Commission Auditor, or other auditor of the County's choosing at the Contractor's expense.

## SECTION 1 GENERAL TERMS AND CONDITIONS

The Contractor shall provide access to all of its records, which relate directly or indirectly to this Agreement at its place of business during regular business hours. The Contractor shall retain all records pertaining to this Agreement and upon request make them available to the County for three years following expiration of the Agreement. The Contractor agrees to provide such assistance as may be necessary to facilitate the review or audit by the County to ensure compliance with applicable accounting and financial standards.

### 1.26 OFFICE OF THE INSPECTOR GENERAL

Miami-Dade County has established the Office of the Inspector General, which is authorized and empowered to review past, present, and proposed County and Public Health Trust programs, contracts, transactions, accounts, records and programs. The Inspector General (IG) has the power to subpoena witnesses, administer oaths, require the production of records and monitor existing projects and programs. The Inspector General may, on a random basis, perform audits on all County contracts. The cost of random audits shall be incorporated into the contract price of all contracts and shall be one quarter (1/4) of one (1) percent of the contract price, except as otherwise provided in Section 2-1078 of the County Code.

### 1.27 PRE-AWARD INSPECTION

The County may conduct a pre-award inspection of the bidder's site or hold a pre-award qualification hearing to determine if the bidder is capable of performing the requirements of this bid solicitation.

### 1.28 PROPRIETARY/CONFIDENTIAL INFORMATION

Proposers are hereby notified that all information submitted as part of, or in support of bid submittals will be available for public inspection after opening of bids in compliance with Chapter 119 of the Florida Statutes; popularly known as the "Public Record Law." The proposer shall not submit any information in response to this solicitation, which the proposer considers to be a trade secret, proprietary or confidential. The submission of any information to the County in connection with this solicitation shall be deemed conclusively to be a waiver of any trade secret or other protection, which would otherwise be available to the proposer. In the event that the proposer submits information to the County in violation of this restriction, either inadvertently or intentionally and clearly identifies that information in the bid as protected or confidential, the County may, in its sole discretion, either (a) communicate with the Proposer in writing in an effort to obtain the Proposer's withdrawal of the confidentiality restriction or (b) endeavor to redact and return that information to the Proposer as quickly as possible, and if appropriate, evaluate the balance of the proposal. The redaction or return of information pursuant to this clause may render a proposal non-responsive.

### 1.29. HEALTH INSURANCE PORTABILITY AND ACCOUNTABILITY ACT (HIPAA)

Any person or entity that performs or assists Miami-Dade County with a function or activity involving the use or disclosure of "individually identifiable health information" (IH) and/or Protected Health Information (PHI) shall comply with the Health Insurance Portability and Accountability Act (HIPAA) of 1996 and the Miami-Dade County Privacy Standards Administrative Order. HIPAA mandates for privacy, security and electronic transfer standards that include but are not limited to:

1. Use of information only for performing services required by the contract or as required by law;
2. Use of appropriate safeguards to prevent non-permitted disclosures;
3. Reporting to Miami-Dade County of any non-permitted use or disclosure;
4. Assurances that any agents and subcontractors agree to the same restrictions and conditions that apply to the Bidder/Proposer and reasonable assurances that IH/PHI will be held confidential;
5. Making Protected Health Information (PHI) available to the customer;
6. Making PHI available to the customer for review and amendment; and incorporating any amendments requested by the customer;

7. Making PHI available to Miami-Dade County for an accounting of disclosures; and
8. Making internal practices, books and records related to PHI available to Miami-Dade County for compliance audits.

PHI shall maintain its protected status regardless of the form and method of transmission (paper records, and/or electronic transfer of data). The Bidder/ Proposer must give its customers written notice of its privacy information practices including specifically, a description of the types of uses and disclosures that would be made with protected health information.

### 1.30. CHARTER COUNTY TRANSIT SYSTEM SALE SURTAX

When proceeds from the Charter County Transit System Sales Surtax levied pursuant to Section 29.121 of the Code of Miami-Dade County are used to pay for all or some part of the cost of this contract, no award for those portions of a Blanket Purchase Order (BPO) utilizing Charter County Transit System Sales Surtax funds as part of a multi-department contract, nor a contract utilizing Charter County Transit System Surtax funds shall be effective and thereby give rise to a contractual relationship with the County for purchases unless and until both the following have occurred: 1) the County Commission awards the contract, and such award becomes final (either by expiration of 10 days after such award without veto by the Mayor, or by Commission override of a veto); and, 2) either, 1) the Citizens' Independent Transportation Trust (CITT) has approved inclusion of the Surtax funding on the contract, or, 2) in response to the CITT's disapproval, the County Commission reaffirms award of the contract by two-thirds (2/3) vote of the Commission's membership and such reaffirmation becomes final. Notwithstanding the other provisions of Section 1.30, award of an allocation for services in support of the CITT's oversight which does not exceed \$1000 will not require Commission or CITT approval and may be awarded by the Executive Director of the CITT.

### 1.31 LOBBYIST CONTINGENCY FEES

A) In accordance with Section 2-11.1(a) of the Code of Miami-Dade County, after May, 16, 2006, no person may, in whole or in part, pay, give or agree to pay or give a contingency fee to another person. No person may, in whole or in part, receive or agree to receive a contingency fee.

B) A contingency fee is a fee, bonus, commission or non-monetary benefit as compensation which is dependant on or in any way contingent upon the passage, defeat, or modification of: 1) any ordinance, resolution, action or decision of the County Commission; 2) any action, decision or recommendation of the County Mayor or any County board or committee; or 3) any action, decision or recommendation of any County personnel during the time period of the entire decision-making process regarding such action, decision or recommendation which foreseeably will be heard or reviewed by the County Commission or a County board or committee.

### 1.32 COMMISSION AUDITOR - ACCESS TO RECORDS

Pursuant to Ordinance No. 03-2, all vendors receiving an award of the contract resulting from this solicitation will grant access to the Commission Auditor to all financial and performance related records, property, and equipment purchased in whole or in part with government funds.

**SECTION 2****SPECIAL CONDITIONS****TRAFFIC POLES, MAST HEADS, AND L.E.D. SIGNALS AND HOUSINGS****2.1 PURPOSE TO ESTABLISH A CONTRACT FOR THE COUNTY**

The purpose of this solicitation is to establish a contract for the purchase of Traffic Signal Poles, Mast Heads, and Street Light Poles and L.E.D Pedestrian Signals and Housings for the Miami-Dade County Public Works and Waste Management Department on an as needed basis.

**2.2 SMALL BUSINESS CONTRACT MEASURES FOR SOLICITATIONS GREATER THAN \$50,000 (Bid Preference)**

A Small Business Enterprise (SBE) bid preference applies to this solicitation.

A 10% percent bid preference shall apply to awards valued up to \$1 million and a 5% percent bid preference shall apply to awards greater than \$1 million. A SBE/Micro Business Enterprise must be certified by the Sustainability, Planning, and Economic Enhancement Department, Small Business Development (SBD) Division for the type of goods and/or services the Enterprise provides in accordance with the applicable Commodity Code(s) for this solicitation. For certification information, contact the Department of Small Business Development at 305-375-CERT (2378) or access Miami-Dade County - Small Business Development - Certification Process

The SBE/Micro Business Enterprise must be certified by bid submission deadline, at contract award and for the duration of the contract to remain eligible for the preference.

**2.3 PRE BID CONFERENCE INTENTIONALLY OMITTED****2.4 TERM OF CONTRACT FIVE (5) YEARS**

This contract shall commence on the first calendar day of the month succeeding approval of the contract by the Board of County Commissioners, or designee, unless otherwise stipulated in the Notice of Award Letter which is distributed by the Internal Services Department, and contingent upon the completion and submittal of all required bid documents. The contract shall expire on the last day of the last month of the contract term.

**2.5 OPTION TO RENEW INTENTIONALLY OMITTED****2.6 METHOD OF AWARD TO MULTIPLE BIDDERS BY GROUP**

Award of this contract will be made to up to (3) lowest priced responsive, responsible bidders on a group-by-group basis. To be considered for award by group, the bidder shall offer prices for all items within a given group. The County will then select the bidders for award for each group by totaling the unit prices for all of the items within each group. If a bidder fails to submit an offer for all items within the group, its offer for that specific group may be rejected.

**SECTION 2****SPECIAL CONDITIONS****TRAFFIC POLES, MAST HEADS, AND L.E.D. SIGNALS AND HOUSINGS**

While the method of award prescribes the method for determining the three (3) lowest responsive, responsible bidders, the County will award this contract to the designated lowest bidder as the primary awarded bidder, and will award this contract to the designated second lowest bidder as the secondary awarded bidder, and will award this contract to the designated third lowest bidder as tertiary respectively. If the County exercises this right, the primary awarded bidder shall have the primary responsibility to initially perform the service or deliver the goods identified in this contract. If the primary awarded bidder fails to perform it may be terminated for default and the County shall have the option to seek the identified goods or services from the secondary awarded bidder. If the secondary awarded bidder fails to perform it may be terminated for default and the County shall have the option to seek the identified goods or service from the tertiary awarded bidder.

Award to multiple bidders is made for the convenience of the County and does not exempt the primary awarded bidder from fulfilling its contractual obligations. Failure of any awarded bidder to perform in accordance with the terms and conditions of the contract may result in the awarded bidder(s) being deemed in breach of contract. The County may terminate the contract for default and charge the awarded bidder re-procurement costs, if applicable.

The groups to be awarded are as follows:

Group A: Traffic Signal Poles, Mast Heads and Street Light Poles

Group B: L.E.D. Pedestrian Signals and Housings

**2.7 PRICES SHALL BE FIXED WITH ADJUSTMENTS**

Prior to the end of the initial one (1) year period, and at each anniversary thereafter, awarded bidders shall have the option to submit a written request for a price adjustment to the County based on changes in the following price indexes:

**Group A**

Producer Price Index (PPI) Series Id. PCU3312 Steel Product MFG From Purchased Steel

**Group B**

Producer Price Index (PPI) Series Id. PCU3313 Alumina & Aluminum Production & Processing

- 2.7.1** It is the awarded bidder's responsibility to request any pricing adjustment under this provision. For any adjustment to commence on the anniversary, the awarded bidder request for adjustment should be submitted 90 days prior to expiration of the then current contract term for all groups. The awarded bidder adjustment request should not be in excess of the relevant pricing index change.

**SECTION 2****SPECIAL CONDITIONS****TRAFFIC POLES, MAST HEADS, AND L.E.D. SIGNALS AND HOUSINGS**

If no adjustment request is received from the awarded bidder, the County will assume that the awarded bidder has agreed that the next term will remain at the current price. Any adjustment request received after the commencement of a new year may not be considered.

The County reserves the right to reject any price adjustments submitted by the awarded bidder and/or to not continue the contract based on such price adjustments. Continuation of the contract beyond the initial term, and any anniversary term, is a County prerogative, and not a right of the awarded bidder. This prerogative will be exercised only when such continuation is clearly in the best interest of the County.

The County reserves the right to extend this contract for up to one hundred-eighty (180) calendar days beyond the current contract term and will notify the awarded bidder in writing of the extension. This contract may be extended beyond the initial one hundred-eighty (180) calendar day extension period by mutual agreement between the County and the awarded bidders, upon approval by the Board of County Commissioners.

**2.8 EXAMINATION OF COUNTY FACILITIES AND INSPECTION OF COUNTY EQUIPMENT INTENTIONALLY OMITTED**

**2.9 EQUAL PRODUCT CAN BE CONSIDERED UPON RECEIPT OF SPECIFIED DATA**

The manufacturer's name, brand name and/or model number information contained in this solicitation are being used for the sole purpose of establishing the minimum requirement of level of quality, standard of performance, and design and is in no way intended to prohibit the offer of another manufacturer's items of equal material unless otherwise indicated on the Bid/Proposal Submission Form.

This specific solicitation requires submission of product information documentation sheets to enable County evaluation of "equal" products.

If an "equal" product may be considered by the County in accordance with the Bid/Proposal Submission Form, the unit shall be equal in quality and standards of performance to the item specified in the solicitation. Where an "or equal" item is offered, and product information sheets are required, the initial offer must be accompanied with two (2) complete sets of product information sheets (such as factory specifications, standard manufacturer information sheets, catalogues, and brochures). Also for product information submittals, all supporting documentation submitted by the offeror must in total meet the required specifications set forth in this solicitation. Where the standard product literature



**SECTION 2****SPECIAL CONDITIONS****TRAFFIC POLES, MAST HEADS, AND L.E.D. SIGNALS AND HOUSINGS**

submitted with the offer provides information that does not comply with the specifications, the offeror shall state, in an official letter on corporate letterhead as part of their initial offer, the differences between the item they are specifically offering, and the equipment described by the standard product literature, to substantiate compliance to all of the specifications set forth in this solicitation. In such cases, any offer submitted with standard product literature but without the letter explaining compliance will result in the rejection of the offer for not meeting the solicitation specifications.

If samples of all "or equal" items bid are required for evaluation, such items are to be provided at no cost to the County, and should be submitted with the initial offer, or at the time of specific request. Failure to meet this requirement may result in your offer being rejected.

The County shall be sole judge of equality, based on the best interests of the County, and its decision in this regard shall be final. Items labeled "No Substitute" on the County's Bid/Proposal Submission Form are the only products that will be accepted under this solicitation.

- 2.10 **LIQUIDATED DAMAGES INTENTIONALLY OMITTED**
- 2.11 **INDEMNIFICATION AND INSURANCE INTENTIONALLY OMITTED**
- 2.12 **BID GUARANTY INTENTIONALLY OMITTED**
- 2.13 **PERFORMANCE BOND INTENTIONALLY OMITTED**
- 2.14 **CERTIFICATIONS INTENTIONALLY OMITTED**
- 2.15 **METHOD OF PAYMENT INVOICES FOR COMPLETED PURCHASES**

The awarded bidder shall submit an invoice(s) to the County user department(s) after purchase has been completed, whether the specific item(s) were picked up by authorized County personnel or delivered to the site by the awarded bidder. In addition to the general invoice requirements set forth below, the invoices shall reference the corresponding delivery ticket number or packing slip number that was signed by an authorized representative of the County user department at the time the items were delivered and accepted. Submittal of these periodic invoices shall not exceed thirty (30) calendar days from the delivery of the items. Under no circumstances shall the invoices be submitted to the County in advance of the delivery and acceptance of the items.

All invoices shall contain the following basic information:



**SECTION 2****SPECIAL CONDITIONS****TRAFFIC POLES, MAST HEADS, AND L.E.D. SIGNALS AND HOUSINGS****I. Awarded bidder Information:**

- The name of the business organization as specified on the contract between Miami-Dade County and awarded bidder
- Date of invoice
- Invoice number
- Awarded bidder's Federal Identification Number on file with Miami-Dade County

**II. County Information:**

- Miami-Dade County Release Purchase Order or Small Purchase Order Number

**III. Pricing Information:**

- Unit price of the goods, services or property provided
- Extended total price of the goods, services or property
- Applicable discounts

**IV. Goods or Services Provided per Contract:**

- Description
- Quantity

**V. Delivery Information:**

- Delivery terms set forth within the Miami-Dade County Release Purchase Order
- Location and date of delivery of goods, services or property

**2.16 SHIPPING TERMS F.O.B. DESTINATION**

All awarded bidders shall quote prices based on F.O.B. Destination and shall hold title to the goods until such time as they are delivered to, and accepted by, an authorized County representative.

**2.17 DELIVERY REQUIREMENTS**

The awarded bidder shall make deliveries within ninety (90) calendar days for group A and forty-five (45) calendar days for group B after the date of the order. All deliveries shall be made in accordance with good commercial practice and all required delivery timeframes shall be

**SECTION 3****TECHNICAL SPECIFICATION****Traffic Poles, Mast Heads, and L.E.D. Signals & Housings**

adhered to by the awarded bidder(s); except in such cases where the delivery will be delayed due to acts of nature, strikes, or other causes beyond the control of the awarded bidder. In these cases, the awarded bidder shall notify the County of the delays in advance of the original delivery date so that a revised delivery schedule can be appropriately considered by the County.

Should the awarded bidder(s) to whom the contract(s) is awarded fail to deliver in the number of days stated above, the County reserves the right to cancel the contract on a default basis after any back order period that has been specified in this contract has lapsed. If the contract is so terminated, it is hereby understood and agreed that the County has the authority to purchase the goods elsewhere and to charge the incumbent awarded bidder with any re-procurement costs. If the awarded bidder fails to honor these re-procurement costs, the County may terminate the contract for default.

Certain County employees may be authorized in writing to pick-up materials under this contract. Awarded bidder shall require presentation of this written authorization. The awarded bidder shall maintain a copy of the authorization. If the awarded bidder is in doubt about any aspect of material pick-up, awarded bidder shall contact the appropriate user department to confirm the authorization.

**2.17.1 DELIVERY TIMES SPECIFIED FOR GROUP A**

The awarded bidder shall only be authorized to deliver items between the hours of 8:30 A.M. to 2:30 P.M Monday through Friday, except for holidays. A twenty-four (24) hours notice of delivery should be given to the County contact person James Jackson at (305) 592-3580 Ext 265.

**2.18 BACK ORDER DELAYS IN DELIVERY SHALL NOT BE ALLOWED**

The County shall not allow any late deliveries attributed to product back order situations under this contract. Accordingly, the awarded bidder is required to deliver all items to the County within the time specified in this solicitation and resultant contract; and no grace period on account of back order situations shall be honored, unless written authorization is issued by the user department, and a new delivery date is mutually established. In the event that the awarded bidder fails to deliver the products within the time specified, the County reserves the right to cancel the order, seek the items from another awarded bidder and charge the incumbent awarded bidder for any re-procurement costs. If the awarded bidder fails to honor these re-procurement costs, the County may terminate the contract for default.

**2.19 WARRANTY SHALL BE ONE YEAR FROM DATE OF ACCEPTANCE****A. Type of Warranty Coverage Required**

In addition to all other warranties that may be supplied by the awarded bidder, the awarded bidder shall warrant its products and/or service against faulty labor and/or defective material, for a minimum period of one (1) year after the date of acceptance of the labor, materials and/or equipment by the County. This warranty requirement

**SECTION 2****SPECIAL CONDITIONS****TRAFFIC POLES, MAST HEADS, AND L.E.D. SIGNALS AND HOUSINGS**

shall remain in force for the full one (1) year period; regardless of whether the awarded bidder is under contract with the County at the time of defect. Any payment by the County on behalf of the goods or services received from the awarded bidder does not constitute a waiver of these warranty provisions.

**B. Correcting Defects Covered Under Warranty**

The awarded bidder shall be responsible for promptly correcting any deficiency, at no cost to the County, within (10) calendar days after the County notifies the awarded bidder of such deficiency in writing. If the awarded bidder fails to honor the warranty and/or fails to correct or replace the defective work or items within the period specified, the County may, at its discretion, notify the awarded bidder, in writing, that the awarded bidder may be debarred as a County bidder and/or subject to contractual default if the corrections or replacements are not completed to the satisfaction of the County within 15 calendar days of receipt of the notice. If the awarded bidder fails to satisfy the warranty within the period specified in the notice, the County may (a) place the awarded bidder in default of its contract, and/or (b) procure the products or services from another awarded bidder and charge the awarded bidder for any additional costs that are incurred by the County for this work or items; either through a credit memorandum or through invoicing.

**2.20 CONTACT PERSONS**

For any additional information regarding the terms and conditions of this solicitation and resultant contract, contact: Mary Hammett, at (305)375-5471 email – [mhammett@miamidade.gov](mailto:mhammett@miamidade.gov)

**2.21 COUNTY USER ACCESS PROGRAM (UAP) FEE**

**USER ACCESS FEE**

Pursuant to Section 2-8.10 of the Miami-Dade County Code, this contract is subject to a user access fee under the County User Access Program (UAP) in the amount of two percent (2%). All sales resulting from this contract, or any contract resulting from this solicitation and the utilization of the County contract price and the terms and conditions identified herein, are subject to the two percent (2%) UAP. This fee applies to all contract usage whether by County Departments or by any other governmental, quasi-governmental or not-for-profit entity.

The awarded bidder providing goods or services under this contract shall invoice the contract price and shall accept as payment thereof the contract price less the 2% UAP as full and complete payment for the goods and/or services specified on the invoice. The County shall retain the 2% UAP for use by the County to help defray the cost of the procurement program. Awarded bidder participation in this invoice reduction portion of the UAP is mandatory.

**SECTION 2****SPECIAL CONDITIONS****TRAFFIC POLES, MAST HEADS, AND L.E.D. SIGNALS AND HOUSINGS****JOINT PURCHASE**

Only those entities that have been approved by the County for participation in the County's Joint Purchase and Entity Revenue Sharing Agreement are eligible to utilize or receive Miami-Dade County contract pricing, terms, and conditions. The County will provide to approved entities a UAP Participant Validation Number. The awarded bidder must obtain the participation number from the entity prior to filling any order placed pursuant to this section. Awarded bidder participation in this joint purchase portion of the UAP, however, is voluntary. The awarded bidder shall notify the ordering entity, in writing, within 3 work days of receipt of an order, of a decision to decline the order.

For all ordering entities located outside the geographical boundaries of Miami-Dade County, the successful awarded bidder shall be entitled to ship goods on an "FOB Destination, Prepaid and Charged Back" basis. This allowance shall only be made when expressly authorized by a representative of the ordering entity prior to shipping the goods.

Miami-Dade County shall have no liability to the awarded bidder for the cost of any purchase made by an ordering entity under the UAP and shall not be deemed to be a party thereto. All orders shall be placed directly by the ordering entity with the awarded bidder and shall be paid by the ordering entity less the 2% UAP.

**AWARDED BIDDER COMPLIANCE**

If an awarded bidder fails to comply with this section, that awarded bidder may be considered in default by Miami-Dade County in accordance with Section 1, Paragraph 1.23 of this contract solicitation and the resulting contract.

**2.22 LOCAL CERTIFIED SERVICE - DISABLED VETERAN'S BUSINESS PREFERENCE**

In accordance with Section 2-8.5.1 of the Miami-Dade County Code, a Local Certified Service-Disabled Veteran Business Enterprise (VBE) that submits a bid for a contract shall receive a bid preference of five percent of the price bid. A VBE is a firm that is a) a local business pursuant to Section 2.8.5 of the Code of Miami-Dade County and b) prior to proposal submittal is certified by the State of Florida Department of Management Services as a service-disabled veteran business enterprise pursuant to Section 295.187 of the Florida Statutes. This preference will only be used for evaluating and awarding the bids and shall not affect the contract price. In procurements where Small Business Enterprises (SBE) measures are being applied, a VBE who is also an SBE shall not receive the veteran's preference provided in this section and shall be limited to any applicable SBE preferences. At the time of bid or proposal submission, the awarded bidder must affirm in writing its compliance with the certification requirements of Section 295.187 of the Florida Statutes and submit this affirmation and a copy of the actual certification along with the bid or proposal submission.

**SECTION 2****SPECIAL CONDITIONS****TRAFFIC POLES, MAST HEADS, AND L.E.D. SIGNALS AND HOUSINGS****2.23 PRIMARY SECONDARY AND TERTIARY, AWARDED BIDDER DESIGNATION**

While the method of award identified in Section 2.6 of the solicitation prescribes the method of determining the lowest responsive, responsible bidders; the County will award this contract to the designated lowest bidder as the primary awarded bidder and will award this contract to the designated second bidder as the secondary awarded bidder, and the third lowest bidder as tertiary awarded bidder respectively. If the County exercises this right, the primary awarded bidder shall be given the first opportunity to perform the service or deliver the goods identified in this contract. If the primary awarded bidder declines this opportunity, the county shall seek the identified goods and services from the secondary awarded bidder, and if the secondary awarded bidder declines this opportunity the county shall seek the identified good and servers from the tertiary awarded bidder.

**2.24 DEMONSTRATION OF EQUIPMENT MAY BE REQUIRED DURING EVALUATION**

After receipt of offers by the County, the bidders may be required to demonstrate their specifically offered equipment to County personnel, at no separate cost. The purpose of this demonstration is to observe the equipment in an operational environment and to verify its capability, suitability, and adaptability in conjunction with the performance requirements stipulated in this solicitation. If a demonstration is required, the County will notify the bidder of such in writing and will specify the date, time and location of the demonstration. If the bidder fails to perform the demonstration on the specified date stipulated in the notice, the County may elect to reject that bidder's offer, or to re-schedule the demonstration, whichever action is determined to be in the best interests of the County. The County shall be the sole judge of the acceptability of the equipment in conformance with the specifications and its decision shall be final.

The equipment used for the demonstration shall be the same as the manufacturer's model identified in the awarded bidder's offer. Accordingly, the equipment used in the demonstration shall create an express warranty that the actual equipment to be provided by the awarded bidder during the contract period shall conform to the equipment used in the demonstration. The awarded bidder shall be required to provide adequate restitution to the County, in the manner prescribed by the County, if this warranty is violated during the term of the contract.

**2.25 INFORMATION SHEETS SHALL BE SUBMITTED FOR EACH ITEM OFFERED**

The offer shall be accompanied with two (2) complete sets of factory information sheets (specifications, brochures, etc.) for each item offered by the bidder. Failure to meet this requirement may result in rejection of the offer. The County's decision as to quality of the product based on submission of the information sheets shall be final.

**SECTION 2****SPECIAL CONDITIONS****TRAFFIC POLES, MAST HEADS, AND L.E.D. SIGNALS AND HOUSINGS****2.26 MATERIALS SHALL BE NEW AND WARRANTED AGAINST DEFECTS**

The awarded bidder hereby acknowledges and agrees that all materials, except where recycled content is specifically requested, supplied by the awarded bidder in conjunction with this solicitation and resultant contract shall be new, warranted for their merchantability, and fit for a particular purpose. In the event any of the materials supplied to the County by the awarded bidder are found to be defective or do not conform to specifications: (1) the materials may be returned to the awarded bidder at the awarded bidder's expense and the contract cancelled or (2) the County may require the awarded bidder to replace the materials at the awarded bidder's expense.

**2.27 STOCK LEVELS SHALL BE MAINTAINED BY AWARDED BIDDER**

The successful awarded bidder(s) shall ensure that adequate stock levels are maintained at its place of business in order to assure the County of prompt delivery. If the delivery terms specified in the Solicitation are not fulfilled by the awarded bidder, the County reserves the right to cancel the order, purchase the goods through another awarded bidder, and charge the Awarded bidder for any reprocurment costs incurred by the County.

**2.28 COMPLIANCE WITH FEDERAL STANDARDS**

All items to be purchased under this contract shall be in accordance with all governmental standards, to include, but not be limited to, those issued by the Occupational Safety and Health Administration (OSHA), the National Institute of Occupational Safety Hazards (NIOSH), and the National Fire Protection Association (NFPA).

**2.29 ACCEPTANCE OF PRODUCT BY THE COUNTY**

The product(s) to be provided hereunder shall be delivered to the County, and maintained if applicable to the contract, in full compliance with the specifications and requirements set forth in this contract. If an awarded bidder-provided product is determined to not meet the specifications and requirements of this contract, prior either to acceptance or upon initial inspection, the item will be returned, at awarded bidder expense, to the awarded bidder. At the County's own option, the awarded bidder shall either provide a direct replacement for the item, or provide a full credit for the returned item. The awarded bidder shall not assess any additional charge(s) for any conforming action taken by the County under this clause.

**2.30 PATENTS AND ROYALTIES**

The awarded bidder, without exception, shall indemnify and save harmless the County and its employees from liability of any nature or kind, including cost and expenses for, or as a result of, any copyrighted, patented, or unpatented invention, process, or article manufactured by the awarded bidder. The awarded bidder has no liability when such claim is solely and exclusively due to the combination, operation, or use of any article supplied hereunder with equipment or data not supplied by awarded bidder, or is based solely and exclusively up on the County's alteration of the article.

**SECTION 2****SPECIAL CONDITIONS****TRAFFIC POLES, MAST HEADS, AND L.E.D. SIGNALS AND HOUSINGS**

The purchaser will provide prompt written notification of a claim of copyright or patent infringement.

Further, if such a claim is made or is pending, the awarded bidder may, at its option and expense, procure for the purchaser the right to continue use of, replace or modify the article to render it non-infringing. (If none of the alternatives are reasonably available, the County agrees to return the article on request to the contractor and receive reimbursement, if any, as may be determined by a court of competent jurisdiction.) If the awarded bidder uses any design, device, or materials covered by letters, patent or copyright, it is mutually agreed and understood without exception that the contract prices shall include all royalties or cost arising from the use of such design, device, or materials in any way involved in the work.

**2.31 PURCHASE OF OTHER ITEMS NOT LISTED WITHIN THIS SOLICITATION BASED ON PRICE QUOTES**

While the County has listed all major items within this solicitation which are utilized by County departments in conjunction with their operations, there may be similar items that must be purchased by the County during the term of this contract. Under these circumstances, a County representative will contact the primary awarded bidder to obtain a price quote for the similar items. If there are multiple awarded bidders on the contract, the County representative may also obtain price quotes from these awarded bidders. The County reserves the right to award these similar items to the primary contract awarded bidder, another contract awarded bidder based on the lowest price quoted, or to acquire the items through a separate solicitation.

**2.32 AVAILABILITY OF CONTRACT TO OTHER COUNTY DEPARTMENTS AND GOVERNMENTAL AGENCIES**

Although this Solicitation is specific to a County Department, it is hereby agreed and understood that any County department or governmental agency may avail itself of this contract and purchase any and all items specified herein from the successful awarded bidder(s) at the contract price(s) established herein. Under these circumstances, a separate purchase order shall be issued by the County, which identifies the requirements of the additional County department(s) or agency (ies).

**2.33 SPECIFICATION DRAWINGS FOR GROUP A**

Specification for Traffic Signal Poles and Street Light Poles have been approved by Miami-Dade county Public Works on September 18, 2006 and shall become part of this Invitation to Bid, See plans on page 15 through 26.

**SECTION 3**  
**TECHNICAL SPECIFICATIONS**

**TRAFFIC POLES, MAST HEADS AND L.E.D. SIGNALS & HOUSINGS**

**3.0 SCOPE OF WORK**

These specifications cover the acquisition of Traffic Signal Poles, Mast Arms, and Street Light Poles, and L.E.D Signals & Housings for the Miami-Dade Public Works and Waste Management Department on an as needed basis. This solicitation has two (2) specifications Group - A Traffic Poles, Mast Heads and Group B L.E.D. Signals & Housings.

**Group-A**

**3.1 Specification for Group – A Traffic Signal Poles, Mast Arms, and Street Light Poles**

Tapered upright poles and mast arms shall be round or polygonal (minimum 12 sides) in cross-section, fabricated from Society of Automotive engineers (SAE) 1020 steel processed to achieve a minimum yield stress of 55,000 Pound per Square Inches (PSI) and conforming to the requirements of American Society of Testing Materials (ASTM) A595 (Grade A), (Linear Taper .14 in/ft.) for poles of up to 13" and A572 Grade 60 for 15" poles.

- 3.1.1 Cast anchor base and handhole frame ASTM A72 Grade 65-35.
- 3.1.2 Hand hole cover plate-11 gauge steel SAE 1015.
- 3.1.3 Cast aluminum pole top aluminum alloy #43
- 3.1.4 Anchor bolts to be high strength steel having 55,000 PSI minimum yield stress 95,000 PSI ultimate conforming to ASTM. See note on page #15, "sheet 1 of 5" Table of Materials Specification.
- 3.1.5 All nuts and bolts less than 5/8" diameter to be passivated stainless steel American Iron and Steel Institute (AISI)-300 series, commercial grade.
- 3.1.6 All other nuts and bolts 5/8" diameter and over shall conform to ASTM A307 and be galvanized in accordance with ASTM A 153 specification.
- 3.1.7 Welding rod ASTM A233 Class E 60XX or E 70 XX.
- 3.1.8 Galvanizing of all steel components shall conform to ASTM A 123 specification special attention should be given to paragraph 9A which covers appearance of the galvanized surface. Surface must have reasonable uniformity of appearance, with no excessive buildup of dross of flux, and no uncoated or black spots. Failure to comply with these requirements will be cause for rejection of the materials.
- 3.1.9 The steel plate of Traffic Arm connection to upright pole must meet the ASTM standard A36. See chart on "Sheet 4 of 5" page #18.
- 3.1.10 Up right pole and mast arm sizes are based upon steel as described in specification. If cross-section other than round is used or if steel other than 55,000 PSI is to be used, bending strength at least equivalent to tube sizes show must be provided by adjusting wall



**SECTION 3**  
**TECHNICAL SPECIFICATIONS**

**TRAFFIC POLES, MAST HEADS AND L.E.D. SIGNALS & HOUSINGS**

**GROUP-A**

thickness, for pole shapes other than round, this minimum strength must be provide through the weakest pole cross-section.

**3.1.11** Interchangeability on bases must be maintained and bolt circle diameter and anchor bolt sizes show must remain the same cast bases are preferred, alternate types must provide nut covers for neat appearance.

**3.1.12** All mast arms installation shall use a universal swivel between disconnect and mast arm.

**3.1.13** A minimum of eighteen (18) signal Poles and Mast Arms will be ordered on each shipment.

NOTE: See Attachment A for copies of specification drawings.

**3.1.14 Street Light Poles Minimum Requirement**

These Street Light Poles must meet the standard specification provided on the attached plans. Any deviation will not be accepted unless authorized in writing by the Miami-Dade County Public Works and Waste Management Department, Street Light Coordinator.

SECTION 3  
TECHNICAL SPECIFICATIONS

TRAFFIC POLES, MAST HEADS AND L.E.D. SIGNALS & HOUSINGS

GROUP B

3.2 Specification for Group B L.E.D. Signals and Housing

Specification of the modules for L.E.D Signals and Housing can be found listed under following appendix:

- Appendix A L.E.D Pedestrian Signal Hand/Person Module
- Appendix B L.E.D Pedestrian Signal Hand/Person countdown Module

**SECTION 3**  
**TECHNICAL SPECIFICATIONS**

**TRAFFIC POLES, MAST HEADS AND L.E.D. SIGNALS & HOUSINGS**

**GROUP B**

**Appendix A**

**Specification**

**MIAMI-DADE COUNTY PUBLIC WORKS DEPARTMENT  
TECHNICAL SPECIFICATION**

**LED PEDESTRIAN SIGNAL  
HAND/PERSON MODULE  
(16" x 18" HOUSING)**

**General Overview**

- 1) The LED pedestrian modules shall be designed to be furnished in a standard aluminum pedestrian signal head housing or as a retrofit replacement for existing modular neon or similar modules and shall not require special tools for installation.
- 2) The LED pedestrian symbol modules shall fit into existing 16" x 18" vehicular (pedestrian) signal housings built to Institute of Transportation Engineers Vehicular Traffic Control Signal Housings (ITE VTCSH) Standards without modification to the housing.
- 3) The LED pedestrian symbol module, when specified furnished complete with housing, shall meet the additional requirements as specified in Sections 2.0 "Housing" and 2.0 "Door Frame and Visor", below.
- 4) The LED signal module shall consist of a side-by-side message by combining the symbols of a "Hand" and "Walking Person", displayed left to right.
- 5) The typical power consumption for the "Hand" shall be 8W; the typical power consumption for the "Person" shall be 7W.

**1.0 Purpose**

The purpose of this specification is to provide the minimum performance requirements for LED pedestrian signal modules (hereafter called module or modules) with "walking person" & "upraised hand". This specification shall be used for only the following size (nominal message bearing surface): 406mm x 457 mm (16 in x 18 in). This specification refers to definitions and practices described in "Pedestrian Traffic Control Signal Indications" published in the *Equipment and Materials Standards of the Institute of Transportation Engineers*, referred to in this document as "PTCSH."

**2.0 Definitions**

The following definitions are in addition to the definitions in the PTCSH.

**2.1 Catastrophic Failure.** The total loss of visible illumination from the LED light source.

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**TECHNICAL SPECIFICATIONS**

**TRAFFIC POLES, MAST HEADS AND L.E.D. SIGNALS & HOUSINGS**

**GROUP B**

**Appendix A**

**Specification**

**2.2 Chromaticity.** The color of the light emitted by a module, specified by the x, y chromaticity coordinates on the 1931 Commission Internationale d'Eclairage (CIE) chromaticity diagram.

**2.3 Conditioning.** Energizing a LED signal module at a specified ambient temperature for a specified period of time, to cause any early electronic component mortality failures to occur and to detect any component reliability problems.

**2.4 Duty Cycle.** The amount of time during a specified time period that a module is energized, expressed as a percent of the specified time period.

**2.5 Abrasion Resistance Material.** A surface coating or integral material that provides outer lens front surface abrasion resistance.

**2.6 LED Light Source.** An array of LEDs mounted on a printed circuit board.

**2.7 LED Pedestrian Signal Module (module).** A signaling unit comprised of an LED light source and a related power supply, and any required lenses, which, when connected to appropriate power, provides a pedestrian signal indication.

**2.8 Luminance.** The luminous flux emitted or reflected from a surface, in a given direction, per unit solid angle, divided by the area of the surface, expressed as  $\text{cd/m}^2$ .

**2.9 Minimum Observed Luminance.** The minimum luminance a module is required to provide throughout service as a pedestrian control signal.

**2.10 Nominal Operating Voltage.** The AC RMS voltage, 120 VAC, at which photometric performance and power consumption are specified.

**2.11 Power Consumption.** The electrical power in Watts consumed by a module when operated at nominal operating voltage and ambient operating temperature range.

**2.12 Power Factor.** The power factor equals Watts divided by Volt-Ampere or the ratio of power consumption in Watts to Volt-Amperes.

**2.13 Total Harmonic Distortion (THD).** THD is the ratio of the root-mean-square (RMS) value of the harmonics to the amplitude of the fundamental component of the AC waveform.

**2.14 Translation.** To move an object along a linear vector, such that the orientation of the object does not rotate relative to the original frame of reference.

**2.15 Turn OFF Time.** The amount of time required after removal of the nominal operating voltage for the LED signal module to show no visible illumination.

**2.16 Turn OFF Voltage.** The voltage below which the LED signal module emits no visible illumination.

**2.17 Turn ON Time.** The amount of time required for the LED signal module to reach 99% of full illumination.

**2.18 Volt-Amperes.** The product of the root-mean-square (RMS) line voltage and RMS line current, measured with true RMS meters.

**SECTION 3**  
**TECHNICAL SPECIFICATIONS**

**TRAFFIC POLES, MAST HEADS AND L.E.D. SIGNALS & HOUSINGS**

**GROUP B**

**Appendix A**

**Specification**

**3.0 Physical & Mechanical Requirements**

**3.1 General**

3.1.1. Usage: Modules shall fit into pedestrian signal housings manufactured in accordance with the ITE PTCSI Standard, March 1988, without modification to the housing.

3.1.2. Installation requirements: Installation of a module into an existing pedestrian signal housing shall only require the removal of the existing optical unit components, i.e., lens, lamp module, gaskets, and reflector; shall be weather tight and fit securely in the housing, and shall connect directly to existing electrical wiring. Installation shall not require special tools.

3.1.3. The sizes of the message bearing surfaces shall be in accordance with the dimensions given in Table 1.

Table 1—Dimensions of Signal Sizes

Message Bearing Surface Height X Width	Minimum Message Size Height X Width
406mm x 457mm (16" x 18")	297mm x 178mm (11" x 7")

3.1.4 LED Modules shall completely comply with the ITE PTCSI -- Part 2: LED Pedestrian Traffic Signal Modules specification. ETL/Intertek certified test reports are required to verify full compliance to the ITE PTCSI -- Part 2: LED Pedestrian Traffic Signal Modules specification.

**3.2 The LED Signal Module**

3.2.1 The module shall be capable of replacing the optical component of the pedestrian indication.

3.2.2 The lens shall have a textured surface to reduce glare.

3.2.3 The module lens may be a replaceable part, without the need to replace the complete module.

3.2.4 Abrasion Resistance - A surface coating or integral material shall be used to provide front surface abrasion resistance.

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**TECHNICAL SPECIFICATIONS**

**TRAFFIC POLES, MAST HEADS AND L.E.D. SIGNALS & HOUSINGS**

**GROUP B**

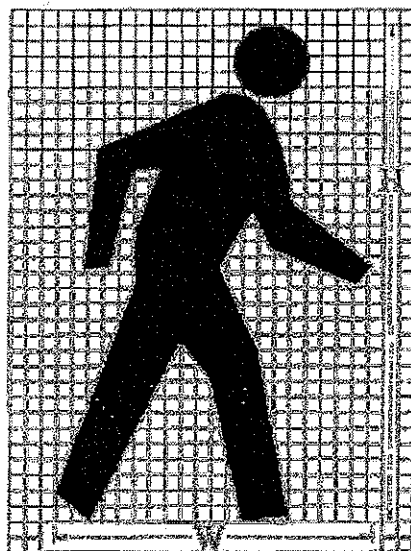
**Appendix A**

**Specification**

3.2.5 For optimum diffusion of all icons, there shall be a minimum of 1.5 inches of space between the surface of the module lens and the LEDs used to illuminate the icons.

3.2.6 The "Portland Orange" LED's shall be of the latest AlGaInP technology and the "Lunar White" LED's of the latest InGaAl technology.

3.2.7 The configurations of the walking person icon and upraised hand icon are illustrated in Figure 1 and Figure 2 respectively. The upraised hand and walking person icons shall be a minimum of 11 inches high and 7 inches wide.



**Figure 1—Walking Person icon**

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**TRAFFIC POLES, MAST HEADS AND L.E.D. SIGNALS & HOUSINGS**

**GROUP B**

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**Specification**

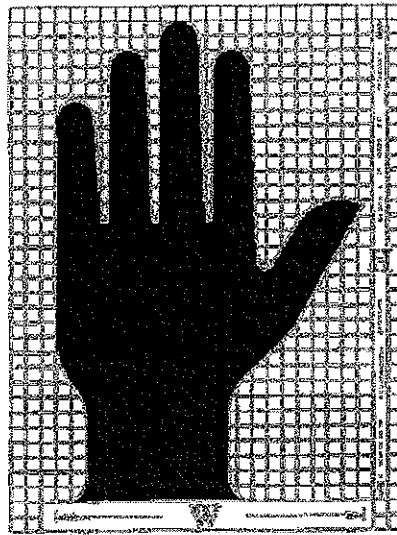


Figure 3—Upraised Hand Icon

**3.2 Environmental Requirements**

3.2.1 All exposed components of a module shall be suitable for prolonged exposure to the environment, without appreciable degradation that would interfere with function or appearance. As a minimum, selected materials shall be rated for service for a period of a minimum of 60 months in a south-facing Arizona Desert installation.

3.2.2 A module shall be rated for use throughout an ambient operating temperature range, measured at the exposed rear of the module, of  $-40^{\circ}\text{C}$  ( $-40^{\circ}\text{F}$ ) to  $+74^{\circ}\text{C}$  ( $+165^{\circ}\text{F}$ ).

3.2.3 A module shall be protected against dust and moisture intrusion, including rain and blowing rain.

3.2.4 The module lens shall not crack, craze or yellow due to solar UV irradiation typical for a south-facing Arizona Desert installation after a minimum of 60 months in service.

**3.4 Construction**

3.4.1 The module shall be a single, self-contained device, not requiring on-site assembly for installation into an existing traffic signal housing. The power supplies for the module shall be integral to the module and shall be conformally coated.

3.4.2 The assembly and manufacturing process for the module shall be designed to assure all internal LED and electronic components are adequately supported to withstand mechanical shock and vibration from high winds and other sources.

**SECTION 3**  
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**TRAFFIC POLES, MAST HEADS AND L.E.D. SIGNALS & HOUSINGS**

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**Appendix A**

**Specification**

**3.5 Materials**

3.5.1 Materials used for the lens and module construction shall conform to ASTM specifications for the materials, where applicable.

3.5.2 Enclosures containing either the power supply or electronic components of the signal module shall be made of UL94 flame retardant materials. The module lens is excluded from this requirement.

**3.6 Module Identification**

3.6.1 Each module shall be identified on the backside with the manufacturer's name, model, operating characteristics and serial number. The operating characteristics identified shall include the nominal operating voltage and stabilized power consumption, in watts and Volt-Amperes. The main module label which includes the module's serial number (or date code) and the model number shall be attached using polyester or vinyl self-adhesive labels. The use of paper labels is not acceptable.

3.6.2 Modules shall have a prominent and permanent vertical indexing indicator, i.e., UP Arrow, or the word UP or TOP, for correct indexing and orientation in the signal housing.

3.6.3 Modules conforming to all requirements of this specification shall have a statement on an attached label which states conformance to the latest version of the ITE PTC91 - Part 2 LED Pedestrian Signal Specification.

**4.0 Photometric Requirements**

**4.1 Luminance, Uniformity and Distribution**

4.1.1 For a minimum period of 80 months, the minimum maintained luminance values for the modules under the operating conditions defined in Sections 3.3.2 and 5.2.1, when measured normal to the plane of the icon surface, shall not be less than:

- Walking Person: 2,200 cd/m<sup>2</sup>
- Upraised Hand: 1,400 cd/m<sup>2</sup>
- Countdown Digits: 1,400 cd/m<sup>2</sup>

The luminance of the emitting surface, measured at angles from the normal of the surface, may decrease linearly to a value of 50% of the values listed above at an angle of 15 degrees.

The light output requirements in this specification apply to pedestrian signal heads without any visors, hooded or louvered (egg-crate). Addition of such visors may affect the light output of the signal head.

4.1.2 The uniformity of the walking person, upraised hand, and countdown digit icons' luminance shall meet a ratio of not more than 1 to 10 between the minimum and maximum luminance values, as measured in 12mm (0.5 in) diameter spots.



**SECTION 3**  
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4.1.3. When operating within the temperature range specified in Section 3.3.1, the average luminance of the module shall not exceed three times the maintained minimum luminance of the modules, as defined in Section 4.1.1.

**4.2 Chromaticity**

The standard colors for the LED Pedestrian Signal Module shall be White for the walking person and Portland Orange for the upraised hand and countdown digit icons. The colors for these icons shall conform to the following color regions, based on the 1931 CIE chromaticity diagram:

Walking Person—White:

Blue boundary:  $x = 0.280$ .

1<sup>st</sup> Green boundary:  $0.280 \leq x < 0.400$   
 $y = 0.7917x + 0.0983$ .

2<sup>nd</sup> Green boundary:  $0.400 \leq x < 0.450$   
 $y = 0.4500x + 0.2910$ .

Yellow boundary:  $x = 0.450$

1<sup>st</sup> Purple boundary:  $0.450 \leq x < 0.400$   
 $y = 0.4500x + 0.1810$ .

2<sup>nd</sup> Purple boundary:  $0.400 \leq x < 0.280$   
 $y = 0.7917x + 0.0483$ .

Point	White	
	x	y
1	0.280	0.320
2	0.400	0.415
3	0.450	0.435
4	0.450	0.385
5	0.400	0.385
6	0.280	0.270

UPRAISED HAND —PORTLAND ORANGE:

YELLOW BOUNDARY:  $y = 0.390$

WHITE BOUNDARY:  $0.600 \leq x \leq 0.680$

$y = 0.690 - x$

RED BOUNDARY:  $y = 0.331$ .

Point	Portland Orange	
	x	y
1	0.6000	0.390
2	0.600	0.390
3	0.650	0.331
4	0.680	0.331

The color regions are illustrated in Attachment 1.

**SECTION 3**  
**TECHNICAL SPECIFICATIONS**

**TRAFFIC POLES, MAST HEADS AND L.E.D. SIGNALS & HOUSINGS**

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**Appendix A**

**Specification**

**4.3. Color Uniformity**

The uniformity of the emitted colors shall be such that any color measurement within a 12mm (0.5 in) spot on the emitting surface shall fall within the following regions around the average measured color of the entire emitting surface:

- Walking Person—White:  $\sqrt{(\Delta x)^2 + (\Delta y)^2} \leq 0.04$ ;

where  $\Delta x$  and  $\Delta y$  are the differences in the chromaticity coordinates of the measured colors to the coordinates of the average color, using the CIE 1931 Chromaticity Diagram and a 2 degree Standard Observer.

- Upraised Hand and Countdown Digits—Portland Orange:

The dominant wavelength for all individual color measurements shall be within  $\pm 3$  nm of the dominant wavelength for the average of all the individual color measurements.

**5.0 Electrical**

**5.1 General**

5.1.1 All wiring shall meet the requirements of Section 13.02 of the VTCSH standard. Secured, color coded, 600V, anti-capillary, 18 AWG jacketed wires, 1 meter (39 in) in length, conforming to the NFPA 70, National Electrical Code, and rated for service at +105°C, shall be provided.

5.1.2 The following color scheme shall be used for the module's AC power leads: Orange for the upraised hand and countdown digits, Blue for the walking person, and White for common.

5.1.3 So as to reduce crowding of terminal blocks and housings, modules containing a Hand & Person Overlay display as well as a Countdown Timer display shall have only three wires (1 orange, 1 blue, 1 white) exiting the LED module for electrical connection to intersection field wires.

5.1.4 The AC power leads shall exit the module via a rubber grommated strain relief, and shall be terminated with quick connect terminals and spade tab adapters. The leads shall be separate at the point at which they leave the module.

**5.2 Voltage Range**

5.2.1 LED signal modules shall operate from a  $60 \pm 3$  Hz AC line power over a voltage range from 80 to 135 VAC RMS.

5.2.2 Fluctuations in line voltage over the range of 80 to 135 VAC shall not affect luminous intensity by more than  $\pm 10$  percent.

5.2.3 The module circuitry shall prevent flicker of the LED output at frequencies less than 100 Hz over the voltage range specified in Section 5.2.1.

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**5.2.4 Low Voltage Turn OFF:** There shall be no visible illumination from the LED signal module when the applied voltage is less than 35 VAC.

**5.2.5 Turn-ON and Turn-OFF Time:** A module shall reach 90% of full illumination (turn-ON) within 75 msec of the application of the nominal operating voltage. The signal shall cease emitting visible illumination (turn-OFF) within 75 msec of the removal of the nominal operating voltage.

**5.2.6 Default Condition:** For abnormal conditions when nominal voltage is applied to the Hand and Person phase wires (with each icon having a neutral return path) the pedestrian signal unit shall default to the hand symbol or shall be blank.

**5.3 Transient Voltage Protection**

The on-board circuitry of the module shall include voltage surge protection, to withstand high-repetition noise transients and low-repetition high-energy transients as stated in Section 2.1.8, NEMA Standard TS 2-2003. In addition, the module shall comply with the following standards: IEC 1000-4-5 at 3kV with a 2 ohm source impedance, ANSI/IEEE C62.41-2002; IEC 61000-4-12 (4kV, 200A, 100ns rise time).

**5.4 Electromagnetic Interference**

The LED signal and associated on-board circuitry shall meet the requirements of the Federal Communication Commission (FCC) Title 47, Subpart B, Section 15 regulations concerning the emission of electronic noise by Class A digital devices.

**5.5 Power Factor (PF) and AC Harmonics**

**5.5.1** Modules shall provide a power factor of 0.90 or greater when operated at nominal operating voltage, and 25°C (77°F).

**5.5.2** Total harmonic distortion induced into an AC power line by a module at nominal operating voltage, and at 25°C (77°F), shall not exceed 20%.

**5.6 Controller Assembly Compatibility**

**5.6.1** The current draw for hand and person icons shall be sufficient to ensure compatibility and proper triggering and operation of load current switches and conflict monitors in signal controller units.

**5.6.2 Off State Voltage Decay:** When the hand or person icon is switched from the On state to the Off state the terminal voltage shall decay to a value less than 10 VAC RMS in less than 100 milliseconds when driven by a maximum allowed load switch leakage current of 10 milliamps peak (7.1 milliamps AC).

**5.7 Failed State Impedance**

The module shall be designed to detect catastrophic loss of the hand/person LED load. Upon sensing the loss of the LED load, the module shall present a resistance of at least 250 kΩ across the hand/person input power leads within 300 msec. The LED light source will be said to have failed catastrophically if it fails to show any visible illumination when energized according to Section 5.2.1 after 75 msec.

**SECTION 3**  
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**Appendix A**

**Specification**

**6.0 Quality Assurance**

**6.1 General**

6.1.1 Quality Assurance Program: Modules shall be manufactured in accordance with a vendor quality assurance (QA) program. The QA program shall include two types of quality assurance: (1) design quality assurance and (2) production quality assurance. The production quality assurance shall include statistically controlled routine tests to ensure minimum performance levels of modules built to meet this specification.

6.1.2 Record Keeping: QA process and test results documentation shall be kept on file for a minimum period of seven years.

6.1.3 Conformance: Module designs not satisfying design qualification testing and the production quality assurance testing performance requirements in Sections 6.3 and 6.4 should not be labeled, advertised, or sold as conforming to this specification.

**6.2 Manufacturers' Serial Numbers**

Each module shall be identified with the information specified in paragraph 3.6.1.

**6.3 Production Tests & Inspections**

6.3.1 Production Test Requirements: All modules tendered for sale shall undergo the following Production Testing & Inspection prior to shipment. Failure of a module to meet the requirements of Production Testing & Inspection shall be cause for rejection. Test results shall be maintained per the requirement of Section 3.1.2.

6.3.1.1 All Production Tests shall be performed at an ambient temperature of 25°C (77°F) and at the nominal operating voltage of 120 VAC.

6.3.2 Production Luminance Test: Hand/Person icons shall be tested for maintained minimum luminance. Any measurement with a correlation to the luminance requirements of Section 4.1.1 may be used. Modules that do not meet the maintained minimum luminance requirements as per Section 4.1.1 shall be rejected.

6.3.3 Power Factor: Hand/Person icons shall be tested for power factor per the requirements of Section 5.5.1. A commercially available power factor meter may be used to perform this measurement. Failure of a module to meet the requirements for power factor (5.5.1) shall be cause for rejection of the module.

6.3.4 Current Consumption Measurement: Hand/Person icons shall be measured for current flow in Amperes. The measured current values shall be compared against the design current values from design qualification measurements in Section 6.4.2.1. A measured current consumption in excess of 120% of the design qualification current value for an ambient temperature of 25°C (77°F) shall be cause for rejection of the module.

6.3.5 Visual Inspection: All modules shall be visually inspected for any exterior physical damage or assembly anomalies. Careful attention shall be paid to the surface of the lens to ensure there are no scratches (abrasions), cracks, chips, discoloration, or other defects. The presence of any such defects shall be cause for rejection of the module.

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**6.4 Design Qualification Testing**

6.4.1 Design Qualification testing shall be performed on the hand/person icons of new module designs, and when a major design change has been implemented on existing hand/person pedestrian signal designs. Modules used in design qualification testing shall be representative of the manufacturer's proposed normal production.

6.4.1.1 Testing shall be performed once every 5 years or when the module design or LED technology has been changed. Test data shall be retained by the module manufacturer in accordance with Section 6.1.2 or for 60 months following final production of a specific design, whichever is longer.

6.4.1.2 Six modules shall be used in Design Qualification Testing. All six modules shall be subjected to conditioning (6.4.2), followed by the Environmental Tests (6.4.3). Following the Environmental Tests, three modules shall undergo Photometric & Colorimetric Tests (6.4.4). The remaining three modules shall undergo the Electrical Tests (6.4.5) and Controller Compatibility Tests (6.4.5.11). Tests shall be conducted in the order described herein, unless otherwise specified.

6.4.1.3 In order for a module design to be considered acceptable for marking with the label described in 3.6.3, all tested modules must comply with the acceptance/rejection criteria for the Environmental Tests (6.4.3), Photometric & Colorimetric Tests (6.4.4), Electrical Tests (6.4.5), and Controller Assembly Compatibility Tests (6.4.5.11).

6.4.2 Conditioning: Modules shall be energized for a minimum of 24 hours, at 100% duty cycle, in an ambient temperature of +40°C (+104°F).

**6.4.3 Environmental Testing:**

6.4.3.1 Mechanical Vibration Testing: Three modules shall be tested per MIL-STD-883, Test Method 2007, using three 4-minute cycles along each x, y, and z axis, at a rate of 2.5 Gs, with a frequency sweep from 2 Hz to 120 Hz.

6.4.3.2 Temperature Cycling: Temperature cycling shall be performed per MIL-STD-883, Test method 1010. The temperature range shall be per Section 3.3.1. A minimum of 20 cycles shall be performed with a 30-minute transfer time between temperature extremes and a 30-minute dwell time at each temperature. Modules under test shall be non-operating.

6.4.3.3 Moisture Resistance: Moisture resistance testing shall be performed on a sample of three modules per MIL-STD-810F, Procedure 1, Rain and Blowing Rain. The test shall be conducted on a stand-alone unit, without a protective housing. The rainfall rate shall be 1.7 mm/min (4 in/hr) and droplet size shall predominantly be between 0.5 mm and 4.5 mm. The module shall be rotated through 120 degrees and the duration of the test shall be 30 minutes. The module shall be energized throughout the test. The water shall be at 25°C. The wind velocity shall be 80 km/hr (50 mph). Any evidence of internal moisture into the module shall be cause for rejection.

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**6.4.3.4 Hard Coat Test (Optional):** When applicable, a sample of three (3) modules shall be tested in accordance to the abrasion resistance test ASTM D1044. A weight of 500 grams shall be applied on a CS10F wheel for 150 cycles.

**6.4.3.5 UV Stabilization:** Documentation may be provided that clearly demonstrates that the external lens complies with the requirements of section 3.3.4.

**6.4.3.6. Environmental Tests Evaluation:** At the conclusion of the Environmental Tests, all the modules will be visually inspected for damage.

**6.4.3.7 Acceptance/Rejection Criteria:** The loosening of the lens, or any internal components, or evidence of other physical damage, such as cracking of the module lens or housing, or presence of internal moisture after testing shall be considered a failure for the proposed design.

**6.4.4 Photometric & Colorimetric Tests:** Three of the modules that were subjected to the Environmental Tests shall undergo Photometric & Colorimetric Tests. Unless otherwise specified, these tests shall be performed with the modules energized at nominal operating voltage (120 VAC).

**6.4.4.1 Maintained Minimum Luminance:** The sample set shall be tested for maintained minimum luminance at both 25°C and 74°C. Prior to making measurements, each module shall be operated at a 100% duty cycle for a minimum of 60 minutes at the test temperature.

**6.4.4.2** For elevated temperature testing at 74°C, the module to be tested shall be mounted in a temperature-testing chamber so that the external surface of the emitting lens is outside the chamber and all portions behind the lens are within the chamber at a temperature of 74°C (165°F). The air temperature in front of the lens of the module shall be maintained at a minimum of 46°C (110°F) during the elevated temperature testing.

Measurements shall be made using a luminance meter located on the physical axis of the module lens at a distance such that the selected aperture samples a spot size of 12mm (0.5 inch) at the lens surface. The position of the luminance meter shall be translated from side to side and up and down, so as to sample nine points across the emitting surface of the module.

The luminance values for the nine points shall be recorded and the average value calculated.

Modules for which the calculated average value of luminance does not meet the requirements of Section 4.1.1 shall be rejected.

**6.4.4.3 Luminance Uniformity:** The sample set shall be tested in accordance with the requirements of Section 4.1.2, using the recorded values of luminance, at a testing temperature of 25°C. The highest and lowest values of luminance shall be recorded and compared. Modules not meeting requirements of Section 4.1.2 shall be rejected.

**6.4.4.3.1 Maximum Luminance:** The sample set shall be tested in accordance with the requirements of Section 4.1.3, using the recorded values of luminance, at testing

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temperatures of 25°C and 74°C. Modules for which the calculated average value of the luminance exceeds the limit established in Section 4.1.3, at either or both temperature levels, shall be rejected.

**6.4.4.4 Chromaticity:** From the sample set, two modules shall be measured for chromaticity per the requirements of Section 4.2. Prior to making measurements, each module shall be operated at a 100% duty cycle for a minimum of 80 minutes at +25°C (+77°F). Color measurements shall be made using a spectro-radiometer with a maximum bandwidth of 4 nm, or a colorimeter that has a measurement uncertainty of less than 2.5% over the emission bandwidth of the icon under measurement.

Measurements shall be made by locating the instrument on the axis normal to the emitting surface of the icon, at a distance such that the meter samples a spot size of 12mm (0.5 inch) at the lens surface. The position of the instrument shall be translated from side to side and up and down, so as to sample nine points across the emitting surface of the module.

The chromaticity coordinates of the emitted light at the nine points shall be recorded and the average value calculated. In addition, the dominant wavelengths for the nine sampled points of the hand icon shall be calculated and recorded.

Modules for which the calculated average chromaticity coordinates do not meet the requirements of Section 4.2 shall be rejected.

**6.4.4.4.1 Color Uniformity:** The sample set shall be tested in accordance with the requirements of Section 4.3, using the recorded values of the chromaticity coordinates (walking person—white icon) or the dominant wavelengths (hand—portland orange icon), from Section 6.4.4.4. Modules not meeting requirements of Section 4.3 shall be rejected.

**6.4.4.5 Photometric & Colorimetric Tests Evaluation:** At the conclusion of the Photometric & Colorimetric Tests, the measurement data shall be compared to the requirements of Sections 4.1, 4.2 and 4.3.

**6.4.4.6 Acceptance/Rejection Criteria:** The failure of any module to meet all of the requirements for maintained minimum luminance (4.1.1) and maximum permissible luminance (4.1.2) at 25°C and/or 74°C, and the requirements for luminance uniformity (4.1.2), chromaticity (4.2), and color uniformity (4.3) at 25°C, shall be considered a failure of the proposed design.

**6.4.5 Electrical.**

**6.4.5.1 Current Consumption:** The sample set shall be measured for current flow in Amperes. The measured current values shall be used for quality comparison of Production Quality Assurance current measurements on production modules.

**6.4.5.2 Temperature vs. Power Consumption:** The sample set shall be tested to measure the change in power consumption in Watts versus the change in temperature over the specified operating temperature range. This data shall be recorded and may be made available to all end users.

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**6.4.5.3 Power Consumption vs. Long-Term Life:** If the rated power consumption of the module at 25°C (77°F) and 74°C (165°F) will change more than 10% over time, the manufacturer may provide documentation showing the projected power consumption in Watts of the module over a period of 60 months from the date of installation. This documentation may include data for the following temperature points: 0°C (32°F), 25°C (77°F), 50°C (122°F) and 74°C (165°F).

**6.4.5.4 Power Factor (PF):** The sample set shall be measured for power factor per the requirements of Section 5.5.1. A commercially available power factor meter may be used to perform this measurement. The PF shall be calculated separately for each of the icons for the module.

**6.4.5.5 Total Harmonic Distortion (THD):** The sample set shall be measured for total harmonic distortion per the requirements of Section 5.5.2. A commercially available total harmonic distortion meter may be used to perform this measurement. The THD shall be measured for each of the icons for the module.

**6.4.5.6 Low Voltage Turn Off:** The sample set shall be measured to ensure compliance with the low voltage turn-off requirement of Section 5.2.4. To test for this condition each icon must first be fully illuminated at the nominal operating voltage. The applied voltage shall then be reduced to the point where there is no visible illumination. This point must be greater than 35 VAC RMS AC.

**6.4.5.7 Turn-On and Turn-Off Times:** The sample set shall be measured to ensure compliance with the turn-on and turn-off requirements of Section 5.2.5. The measurement shall be conducted using a two channel oscilloscope to measure the time delay between when the module is energized at 120 VAC RMS and when the light output reaches 90% of full output. A photo-multiplier tube shall be used to measure the light output of the module. The same apparatus shall be used to measure the time delay between when the module is de-energized and when the light output reaches 9% of full output. The time in msec shall be plotted in the X axis and light output shall be plotted in the Y axis.

A module not reaching 90% nominal light output within 75 msec at start-up or still showing light output 75 msec after being de-energized shall be deemed to have failed this test.

**6.4.5.8 Electronic Noise:** From the sample set, a sample of 2 modules shall be tested. The modules shall be tested for conformance with the requirements of a Class A digital device, as specified in FCC Title 47, Subpart B, Section 15.103(h).

**6.4.5.9 Nondestruct Transient Immunity:** The sample set shall be tested for transient immunity using the procedure described in Section 2.1.8, NEMA Standard TS 2-2003. Failure to meet these requirements shall be cause for rejection.

**6.4.5.10 Electrical Tests Evaluation:** At the conclusion of the Electrical Tests, the measurement data shall be compared to the requirements of Sections 5.2 through 5.7.

**6.4.5.10.1 Acceptance/Rejection Criteria:** The failure of any module to meet the applicable requirements of Sections 5.2 through 5.7 shall be considered a failure of the proposed design.



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6.4.5.11 Controller Assembly Compatibility. Due to the low load current draw and high off-state impedance of modules, testing shall be performed to ensure the module design is compatible and operates properly with load current switches and conflict monitors in NEMA and Type 170 traffic signal control units.

Before performing the following tests, the manufacturer should ascertain which type of signal controller unit(s) the procuring traffic authority customer has in use and tailor those tests to meet the requirements of that type and model of controller unit(s).

6.4.5.11.1 Load Switch Compatibility. The sample set shall be tested for compatibility and proper operation with load current switches. Each module shall be connected to a variable ac voltage supply. The ac line current into the module shall be monitored for sufficient current draw to ensure proper load switch operation while the voltage is varied from 80 VAC RMS to 135 VAC RMS. Failure of the current draw to ensure proper load current switch operation shall be cause for rejection.

6.4.5.11.2 Signal Conflict Monitor (MMU) Compatibility: The sample set shall be tested for compatibility and proper operation with signal conflict monitors. Each module shall be operated from a 135 VAC RMS supply. A 10.5 k $\Omega$  resistor shall be wired in series in the hot line between the module and the ac power supply. A single-pole-single-throw switch shall be wired in parallel across the 10.5 k $\Omega$  resistor. A 220 k $\Omega$  shunt resistor shall be wired between the hot line connection and the neutral line connection on the module. Conflict monitor compatibility shall be tested by measuring the voltage decay across the 220 k $\Omega$  shunt resistor as follows: The single-pole-single-throw switch shall be closed, shorting out the 10.5 k $\Omega$  resistor, allowing the ac power supply to energize the module. Next the switch shall be opened, and the voltage across the 220 k $\Omega$  shunt resistor shall be measured for a decay to a value equal to or less than 10 VAC RMS within a time period equal to or less than 100 milliseconds. This test shall be repeated a sufficient number of times to ensure that testing occurs at the peak of the ac line voltage cycle.

A voltage decay across the 220 k $\Omega$  shunt resistor to a value greater than 10 VAC RMS or a decay time to 10 VAC RMS greater than 100 milliseconds shall be cause for rejection.

6.4.5.11.3 Controller Assembly Compatibility Evaluation: At the conclusion of the Controller Assembly Compatibility Tests, the measurement data shall be compared to the requirements of the specific make and model Controller Assembly with which the module design is intended to operate.

6.4.5.11.4 Acceptance/Rejection Criteria: Failure of the module to draw sufficient current to ensure compatibility with the load current switches in the appropriate Controller Assembly (5.7) and/or failure of the circuit voltage to decay to a value equal to or less than 10VAC RMS within a time period equal to or less than 100 milliseconds (5.7) shall be considered a failure of the proposed design.

6.4.5.12 Failed State Impedance Test: The modules shall be tested for compliance with the requirement for provision of a failed-state impedance (5.7). The test is conducted in two parts: first the module is energized with the LED load disconnected from the power supply to establish the failed-state impedance. Next, the requirement for the failed state impedance is tested. The module shall be operated from a 120 VAC voltage supply.

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a) Wire a 50 k $\Omega$  resistor in series with the hot line between the module and the AC power supply. A 100 k $\Omega$  shunt resistor shall be wired between the hot line connection and the neutral line connection on the module. A single-pole-single-throw switch shall be wired in parallel with the 50 k $\Omega$  resistor. With the switch in the closed position and the LED load disconnected from the module power supply, energize the module for 300ms to establish the failed state impedance (5.7).

b) The second part of the failed state impedance test is conducted to insure that the appropriate failed state impedance is established. The switch is opened and the circuit is energized by the 120VAC voltage supply. The voltage across the 100 k $\Omega$  shunt resistor shall be continuously monitored. The voltage shall decay to a value equal to or greater than 70 VAC RMS. For the continuous interval of 500 ms through 1500 ms, after energizing the circuit with an open switch, the measured voltage shall be 70 VAC RMS or greater. The second part of the test shall be repeated 10 times, with the minimum voltage recorded during the continuous interval of 500 ms through 1500 ms, after energizing the circuit with an open switch, recorded as the final test value.

6.4.5.12.1 Failed State Impedance Test Evaluation: At the conclusion of the Failed State Impedance Test, the measurement data shall be compared to the requirement of Section 5.7.

6.4.5.12.2 Acceptance/Rejection Criteria: Failure of the voltage across the 100 k $\Omega$  shunt resistor to remain at a value equal to or greater than 70 VAC RMS for the continuous time interval of 500 ms through 1500 ms, after energizing the circuit with an open switch, shall be considered a failure of the proposed design.

**7.0 Housing (When modules specified complete with housing)**

7.1 The maximum overall dimensions of the signal head shall be 15-1/2 inches wide, 18-3/4 inches high including latch/wings legs; and 9 inches deep, including the sunshield.

7.2 The housing shall be a one (1) piece corrosion resistant aluminum alloy die-casting complete with integrally cast top, bottom, sides and back. Four (4) integrally cast hinge leg pairs, two (2) at the top and two (2) at the bottom of each case, shall be provided for operation of a swing down door.

7.3 The housing for pedestrian signals shall be dustproof, weatherproof and corrosion resistant and shall provide for easy access to and replacement of all components.

7.4 The housing shall have openings at the top and bottom to accommodate standard Department approved traffic signal mounting brackets. The top and bottom openings of the housing shall have a traffic signal industry standard Shurlock boss. The teeth shall be clean and sharp, to provide full engagement with the mounting brackets. The radial angular grooves of the Shurlock boss when used with the Shurlock fittings shall provide total positive positioning of the entire signal head to eliminate rotation or misalignment of the head.

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**8.0 Door Frame and Visor (When modules specified complete with Housing)**

- 8.1 The doorframe shall be a one (1) piece corrosion resistant aluminum alloy die-casting, complete with two (2) hinge lugs cast at the bottom and two (2) latch slots cast at the top of the door. The door shall be attached to the housing by means of two (2) Type 304 stainless steel spring pins. Two (2) stainless steel hinged bolts with captive stainless steel wing nuts and washers shall be attached to the housing with the use of stainless steel spring pins. Therefore, latching and unlatching of the door shall require no tools.
- 8.2 The signal head shall be provided with a Z-crate type or Department approved equivalent type visor (sunshield) designed to eliminate sun phantom.
- 8.3 The Z-crate type sunshield shall be installed parallel to the face of the Hand/Person symbol message. The Z-crate sunshield assembly shall be held in place by the use of stainless steel screws.
- 8.4 The Z-crate type sunshield assembly shall consist of horizontal louvers formed in a zigzag pattern or a Department approved pattern.
- 8.5 The basic material used in construction of the visor shall be nominally 0.020 thick and shall be one-hundred percent (100%) impregnated black polycarbonate plastic processed with a flat finish on both sides.
- 8.6 The assembly shall be enclosed in a mounting frame constructed of 0.040 minimum thickness aluminum or polycarbonate plastic. This frame shall be 1-1/2 inches deep and shall contain mounting holes for direct insertion in the pedestrian signal doorframe.
- 8.7 When installed in front of the Hand/Person signal messages, when illuminated, the visor (sunshield) shall not obscure or modify the clear recognition of a "Hand" or "Walking Person" symbol to a pedestrian facing the signal head at zero degrees (0°) horizontal, when viewed installed, at a height between 7 to 10 feet vertically above the sidewalk from a distance between fifteen feet (15') and one hundred-twenty feet (120').

**8.0 Warranty**

Manufacturers shall provide a written warranty issued by the factory located in the NAFTA country of module origin with the following minimum provisions:

- 8.1 Modules shall be replaced, repaired or purchase value refunded if the module fails to function as intended due to workmanship or material defects within the first sixty (60) months from the date of delivery.
- 8.2 Modules which exhibit luminous intensities less than the minimum specified values within the first sixty (60) months of the date of delivery shall be replaced, repaired or purchase value refunded.
- 8.3 Upon request, the LED pedestrian module Manufacturer shall provide written documentation of its ability to satisfy a worst-case, catastrophic warranty claim. A current corporate annual report duly-certified by an independent auditing firm, containing financial statements illustrating sufficient cash-on-hand and net worth to satisfy a worst-case, catastrophic warranty claim is an example of suitable documentation. The documentation shall clearly disclose:

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- a) The country in which the factory of module origin is located.
- b) The name of the company or organization that owns the factory of module origin including any and all of its parent companies and/or organizations, and their respective country of corporate citizenship
- c) For firms with business and/or corporate citizenship in the United States of less than seven (7) years, the process by which the end-user/owners of the modules will be able to obtain worst-case, catastrophic warranty service in the event of bankruptcy or cessation-of-operations by the firm supplying the modules within North America, or in the event of bankruptcy or cessation-of-operations by the owner of the factory of origin, shall be clearly disclosed.

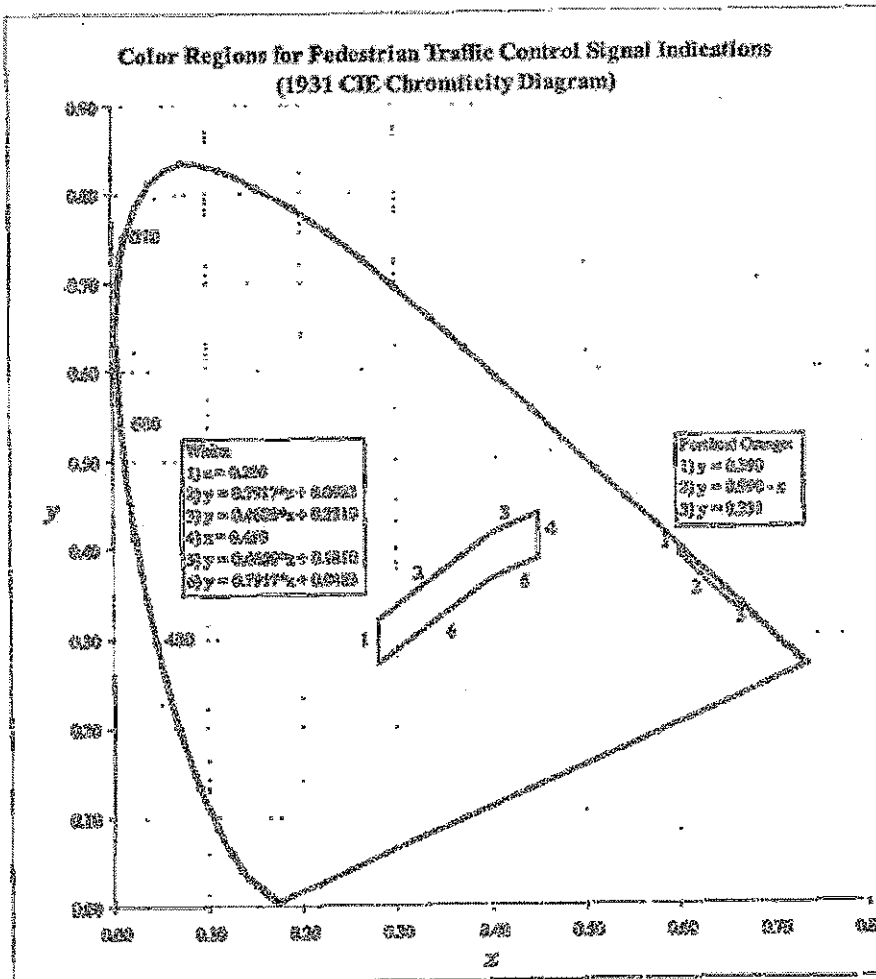
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Attachment for Appendix A

ATTACHMENT 1



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**MIAMI-DADE COUNTY PUBLIC WORKS DEPARTMENT**  
**TECHNICAL SPECIFICATION**

**LED PEDESTRIAN SIGNAL**  
**HAND/PERSON - COUNTDOWN MODULE**  
**(16" x 16" HOUSING)**

**1.0 Purpose**

The purpose of this specification is to provide the minimum performance requirements for LED pedestrian signal modules (hereafter called module or modules) with "walking person", "upraised hand", and "countdown digit" icons. This specification shall be used for only the following size (nominal message bearing surface): 406mm x 407 mm (16 in x 16 in). This specification refers to definitions and practices described in "Pedestrian Traffic Control Signal Indications" published in the *Equipment and Materials Standards of the Institute of Transportation Engineers*, referred to in this document as "PTCSI."

**2.0 Definitions**

The following definitions are in addition to the definitions in the PTCSI.

**2.1 Chrominance Factor.** The total loss of visible luminance from the LED light source.

**2.2 Chromaticity.** The color of the light emitted by a module, specified by the x, y chromaticity coordinates on the CIE Commission Internationale d'Éclairage (CIE) chromaticity diagram.

**2.3 Consistency.** Ensuring a LED signal module at a specified ambient temperature for a specified period of time, to ensure any early electronic component mortality failures to occur and to detect any component reliability problems.

**2.4 Duty Cycle.** The amount of time during a specified time period that a module is energized, expressed as a percent of the specified time period.

**2.5 Abrasion Resistance Material.** A surface coating or integral material that provides outer lens front surface abrasion resistance.

**2.6 LED Light Source.** An array of LEDs mounted on a printed circuit board.

**2.7 LED Pedestrian Signal Module (module).** A signaling unit comprised of an LED light source and a related power supply, and any required lenses, which, when connected to appropriate power, provides a pedestrian signal indication.

**2.8 Luminance.** The luminous flux emitted or reflected from a surface, in a given direction, per unit solid angle, divided by the area of the surface, expressed as cd/m<sup>2</sup>.

**2.9 Minimum Maintained Luminance.** The minimum luminance a module is required to provide throughout service as a pedestrian control signal.

**2.10 Nominal Operating Voltage.** The AC RMS voltage, 120 VAC, at which photometric performance and power consumption are specified.

**2.11 Power Consumption.** The electrical power in Watts consumed by a module when operated at nominal operating voltage and ambient operating temperature range.

**2.12 Power Factor.** The power factor equals Watts divided by Volt-Amperes or the ratio of power consumption in Watts to Volt-Amperes.

**2.13 Total Harmonic Distortion (THD).** THD is the ratio of the root-mean-square (RMS) value of the harmonics to the amplitude of the

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fundamental component of the AC waveform.

**2.14 Translate.** To move an object along a linear vector, such that the orientation of the object does not rotate relative to the original frame of reference.

**2.15 Turn OFF Time.** The amount of time required after removal of the nominal operating voltage for the LED signal module to show no visible illumination.

**2.16 Turn OFF Voltage.** The voltage below which the LED signal module emits no visible illumination.

**2.17 Turn ON Time.** The amount of time required for the LED signal module to reach 90% of full illumination.

**2.18 Volt-Amperes.** The product of the maximum-voltage (V<sub>max</sub>) line voltage and RMS line current, measured with true RMS meters.

#### 3.0 Physical & Mechanical Requirements

##### 3.1 General

**3.1.1. Usage:** Modules shall fit into pedestrian signal housings manufactured in accordance with the ITE PTCS Standard, March 1995, without modification to the housing.

**3.1.2. Installation requirements:** Installation of a module into an existing or as a retrofit replacement for existing modular noun or similar pedestrian signal housing shall only require the removal of the existing optical unit components, i.e., lens, lamp module, gaskets, and reflector; shall be weather tight and fit securely in the housing; and shall connect directly to existing electrical wiring. Installation shall not require special tools.

The LED pedestrian symbol/countdown module, when specified furnished complete with housing, shall meet the additional

requirements as specified in Sections 8.0 "Housing" and 9.0 "Door Frame and Visor" below.

**3.1.3.** The sizes of the message bearing surfaces shall be in accordance with the dimensions given in Table 1.

Table 1—Dimensions of Signal Sizes

Message Bearing Surface Height X Width	Minimum Message Size Height X Width
407mm X 457mm (16" X 18")	207mm X 178mm (11" X 7")

**3.1.4** Modules shall completely comply with the ITE PTCS – Part 2: LED Pedestrian Traffic Signal Modules specification. ETL/Intertek certified test reports are required to verify full compliance to the ITE PTCS – Part 2: LED Pedestrian Traffic Signal Modules specification.

##### 3.2 LED Signal Module

**3.2.1** The module shall be capable of replacing the optical component of the pedestrian indication.

**3.2.2** The lens shall have a textured surface to reduce glare.

**3.2.3** The module lens may be a replaceable part, without the need to replace the complete module.

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3.2.4 Abrasion Resistance - A surface coating or integral material shall be used to provide front surface abrasion resistance.

3.2.5 For optimum diffusion of all icons, there shall be a minimum of 1.5 inches of space between the surface of the module lens and the LEDs used to illuminate the icons.

3.2.6 The "Portland Orange" LED's shall be of the latest AlGaInP technology and the "Lunar White" LED's of the latest InGaIn technology.

3.2.7 The configurations of the walking person icon and upraised hand icon are illustrated in Figure 1 and Figure 2 respectively. The upraised hand and walking person icons shall be a minimum of 11 inches high and 7 inches wide.

3.2.8 The LED countdown display shall consist of two 7 segment digits forming the time display. The configuration of the countdown display shall be such that the height of the countdown digits shall be 9 inches and the overall width of the digit display (both digits side-by-side) shall be 7 inches. Each individual 7-segment digit shall be 3.25 inches wide, with 0.5 inches of space between the two digits.

3.2.9 The countdown display shall be UL/ETC compliant for currents over 100 feet long.

**3.2.10 Countdown Drive Circuitry**

3.2.10.1 The Countdown Timer portion of the signal shall have a high "off state" input impedance so as not to provide a load indication to conflict monitors and interfere with the monitoring of the pedestrian signals. The input impedance of the countdown circuitry shall maintain a voltage reading above 25 VAC to the conflict monitor for a minimum of 4 units connected on the same channel.

3.2.10.2 The Countdown Timer drive circuitry shall not be damaged when subjected to defective load switches providing a half wave signal output.

**3.2.11 Countdown Functionality**

3.2.11.1 The countdown module shall be compatible with all traffic signal controllers that are fully compliant to NEMA TS-1, NEMA TS-2, Type 170, and Type 2070 traffic signal controller specifications.

3.2.11.2 The countdown timer module shall have a micro-processor capable of recording its own time when connected to a traffic controller.

3.2.11.3 When connected, the module shall blank out the display during the initial cycle while it records the countdown time using the Walk (Person) & Flash (Flashing Hand) signal indications.

3.2.11.4 The countdown timer module shall continuously monitor the traffic controller for any changes to the pedestrian phase time and re-program itself automatically if needed.

3.2.11.5 The countdown module shall register the time for the walk and clearance intervals individually and shall begin counting down at the beginning of the pedestrian change interval.

3.2.11.6 When the flashing Hand becomes solid, the module shall display 0 and then blank-out. The display shall remain dark until the beginning of the next countdown.

3.2.11.7 In the event of a pre-emption sequence, the countdown module shall skip the pre-empted clearance time and reach 0 at the same time as the flashing Hand becomes solid.

3.2.11.8 In the cycle following a pre-



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emption call, the signal shall be capable of displaying the correct time and not be affected by the reduced previous cycle. The countdown shall reach 0 at the same time as the flashing Hand becomes solid.

3.2.11.9 The countdown timer shall be capable of timing 2 consecutive complete pedestrian cycles outputted by the traffic controller (no steady Hand signal between cycles).

3.2.11.10 The countdown module shall have an internal conflict warning providing caution between the Hand/Person signal indications and the Countdown timer display.

3.2.11.11 The countdown module shall NOT have a user selectable option offering the possibility to countdown the entire duration of the walk and clearance time.

3.2.11.12 The countdown module shall NOT have a user selectable option which allows the countdown time to be stored in memory inside the countdown when AC power is removed from the module for extended periods of time.

3.2.11.13 The countdown module shall NOT have dip-switches, but shall be able to pad recycle directly back to walk interval from truncated pad clearance interval.

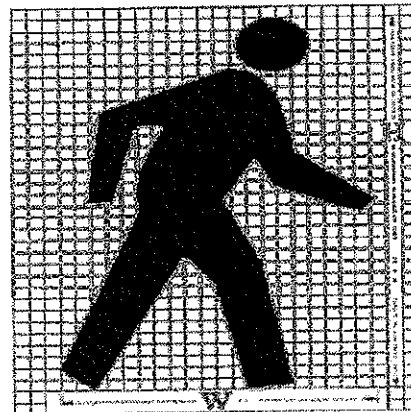


Figure 1—Walking Person icon

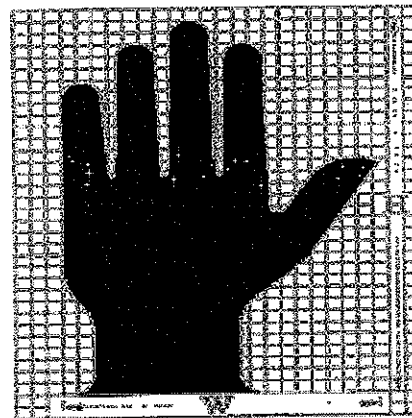


Figure 2—Upraised Hand icon

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##### 3.3 Environmental Requirements

3.3.1 All exposed components of a module shall be suitable for prolonged exposure to the environment, without appreciable degradation that would interfere with function or appearance. As a minimum, selected materials shall be rated for service for a period of a minimum of 60 months in a south-facing Arizona Desert installation.

3.3.2 A module shall be rated for use throughout an ambient operating temperature range, measured at the exposed rear of the module, of  $-40^{\circ}\text{C}$  ( $-40^{\circ}\text{F}$ ) to  $+74^{\circ}\text{C}$  ( $+165^{\circ}\text{F}$ ).

3.3.3 A module shall be protected against dust and moisture intrusion, including rain and blowing rain.

3.3.4 The module lens shall not crack, craze or yellow due to solar UV radiation typical for a south-facing Arizona Desert installation after a minimum of 60 months in service.

##### 3.4 Construction

3.4.1 The module shall be a single, self-contained device, not requiring on-site assembly for installation into an existing traffic signal housing. The power supply for the module shall be integral to the module and shall be conformably coated.

3.4.2 The assembly and manufacturing process for the module shall be designed to assure all internal LED and electronic components are adequately supported to withstand mechanical shock and vibration from high winds and other sources.

##### 3.5 Materials

3.5.1 Materials used for the lens and module construction shall conform to ASTM specifications for the materials, where applicable.

3.5.2 Enclosures containing either the power supply or electronic components of the signal module shall be made of UL94 flame retardant materials. The module lens is excluded from this requirement.

##### 3.6 Module Identification

3.6.1 Each module shall be identified on the backside with the manufacturer's name, model, operating characteristics and serial number. The operating characteristics identified shall include the nominal operating voltage and stabilized power consumption, in watts and Volt-Amperes. The main module label which includes the module's serial number (or date code) and the model number shall be attached using polyester or vinyl self-adhesive labels. The use of paper labels is not acceptable.

3.6.2 Modules shall have a prominent and permanent vertical indexing indicator, i.e., UP Arrow, or the word UP or TOP, for correct indexing and orientation in the signal housing.

3.6.3 Modules conforming to all requirements of this specification shall have a statement on an attached label which states conformance to the latest version of the ITE FTC08 - Part 2 LED Pedestrian Signal Specification.

##### 4.0 Photometric Requirements

##### 4.1 Luminance, Uniformity and Distribution

4.1.1 For a minimum period of 60 months, the minimum maintained luminance values for the modules under the operating conditions defined in Sections 3.3.2 and 3.2.1, when measured normal to the plane of the lens surface, shall not be less than:

- Walking Person: 2,200  $\text{cd/m}^2$
- Upraised Hand: 1,400  $\text{cd/m}^2$
- Countdown Digits: 1,400  $\text{cd/m}^2$

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The luminance of the emitting surface, measured at angles from the normal of the surface, may decrease linearly to a value of 50% of the value listed above at an angle of 15 degrees.

The light output requirements in this specification apply to pedestrian signal heads without any visors, hooded or louvered (egg-crate). Addition of such visors may affect the light output of the signal head.

4.1.2 The uniformity of the walking person, upraised hand, and countdown digit local luminance shall meet a ratio of not more than 1 to 10 between the minimum and maximum luminance values, as measured in 12mm (0.5 in) diameter spots.

4.1.3. When operating within the temperature range specified in Section 3.3.1, the average luminance of the module shall not exceed three times the maintained minimum luminance of the module, as defined in Section 4.1.1.

#### 4.2 Chromaticity

The standard colors for the LED Pedestrian Signal Module shall be White for the walking person and Portland Orange for the upraised hand and countdown digit icons. The colors for these icons shall conform to the following color regions, based on the 1931 CIE chromaticity diagram:

Walking Person—White:

Blue boundary:  $x = 0.280$

1<sup>st</sup> Green boundary:  $0.280 \leq x < 0.400$

$y = 0.7917x + 0.0353$

2<sup>nd</sup> Green boundary:  $0.400 \leq x < 0.450$

$y = 0.4600x + 0.2310$

Yellow boundary:  $x = 0.450$

1<sup>st</sup> Purple boundary:  $0.450 \leq x < 0.490$

$y = 0.4600x + 0.1610$

2<sup>nd</sup> Purple boundary:  $0.490 \leq x < 0.280$

$y = 0.7917x + 0.0463$

Point	White	
	X	Y
1	0.280	0.320
2	0.400	0.415
3	0.450	0.438
4	0.450	0.358
5	0.400	0.285
6	0.280	0.270

#### UPRAISED HAND AND COUNTDOWN DIGITS—

PORTLAND ORANGE:

YELLOW BOUNDARY:  $y = 0.320$

WHITE BOUNDARY:  $0.900 \leq x \leq 0.600$

$y = 0.600 - x$

RED BOUNDARY:  $y = 0.331$

Point	Portland Orange	
	X	Y
1	0.6000	0.390
2	0.600	0.390
3	0.550	0.331
4	0.500	0.331

The color regions are illustrated in Attachment 1.

#### 4.3 Color Uniformity

The uniformity of the emitted colors shall be such that any color measurement within a 12mm (0.5 in) spot on the emitting surface shall fall within the following regions around the average measured color of the entire emitting surface:

Walking Person—White:

$$\sqrt{(\Delta x)^2 + (\Delta y)^2} \leq 0.04$$

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where  $\Delta x$  and  $\Delta y$  are the differences in the chromaticity coordinates of the measured colors to the coordinates of the average color, using the CIE 1931 Chromaticity Diagram and a 2 degree Standard Observer.

#### Upstream Hand and Countdown Digits—Portland Orange:

The dominant wavelength for all individual color measurements shall be within  $\pm 5$  nm of the dominant wavelength for the average of all the individual color measurements.

#### 2.0 General

##### 5.1 General

5.1.1 All wiring shall meet the requirements of Section 13.02 of the VTCOH standard. Secured, color coded, 600V, anti-capillary, 18 AWG jacketed wires, 1 meter (39 in) in length, conforming to the NFPA 70, National Electrical Code, and rated for service at  $+105^{\circ}\text{C}$ , shall be provided. The typical power consumption for the hand shall be 8 watt, for the Person, 6 watt, for the countdown, 6 watt.

5.1.2 The following color scheme shall be used for the module's AC power leads: Orange for the upstream hand and countdown digits, Blue for the walking person, and White for common.

5.1.3 So as to reduce crowding of terminal blocks and housings, modules containing a Hand & Person Change display as well as a Countdown Timer display shall have only three wires (1 orange, 1 blue, 1 white) exiting the LED module for electrical connection to interconnection field wires.

5.1.4 The AC power leads shall exit the module via a rubber grommeted strain relief, and shall be terminated with quick connect terminals and splice tap adapters. The leads shall be separate at the point at which they leave the module.

##### 5.2 Voltage Range

5.2.1 LED signal modules shall operate from a 60/60 Hz AC line power over a voltage range from 85 to 125 VAC RMS.

5.2.2 Fluctuations in line voltage over the range of 85 to 125 VAC shall not affect luminous intensity by more than  $\pm 10$  percent.

5.2.3 The module circuitry shall prevent flicker of the LED output at frequencies less than 100 Hz over the voltage range specified in Section 5.2.1.

5.2.4 Low Voltage Turn OFF: There shall be no visible illumination from the LED signal module when the applied voltage is less than 35 VAC.

5.2.5 Turn-ON and Turn-OFF Time: A module shall reach 90% of full illumination (turn-ON) within 75 msec of the application of the nominal operating voltage. The signal shall cease emitting visible illumination (turn-OFF) within 75 msec of the removal of the nominal operating voltage.

5.2.6 Default Condition: For abnormal conditions when nominal voltage is applied to the Hand and Person phase wires (with each lead having a neutral return path) the pedestrian signal unit shall default to the hand symbol or shall be blank.

##### 5.3 Transient Voltage Protection

The on-board circuitry of the module shall include voltage surge protection, to withstand high-repetition noise transients and low-repetition high-energy transients as stated in Section 2.1.3, IEEE Standard 15 2-2002. In addition, the module shall comply with the following standards: IEC 1000-4-5 at 3kV with a 2 ohm source impedance, ANSI/IEEE C12.41-2002; IEC 61000-4-12 (3kV, 200A, 100kHz ring wave).

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##### 5.4 Electronic Noise

The LED signal and associated on-board cabling shall meet the requirements of the Federal Communication Commission (FCC) Title 47, Subpart E, Section 15 regulations concerning the emission of electronic noise by Class A digital devices.

##### 5.5 Power Factor (PF) and AC Harmonics

5.5.1 Modules shall provide a power factor of 0.90 or greater when operated at nominal operating voltage, and 25°C (77°F).

5.5.2 Total harmonic distortion introduced into an AC power line by a module at nominal operating voltage, and at 25°C (77°F), shall not exceed 20%.

##### 5.6 Controller Assembly Compatibility

5.6.1 The current draw for hand and person icons shall be sufficient to ensure compatibility and proper triggering and operation of load current switches and control monitors in signal controller units.

5.6.2 Off State Voltage Decay: When the hand or person icon is switched from the On state to the Off state the terminal voltage shall decay to a value less than 10 VAC RMS in less than 100 milliseconds when driven by a maximum allowed load switch leakage current of 10 millamps peak (7.1 millamps AC).

##### 5.7 Failed State Impedance

The module shall be designed to detect catastrophic loss of the hand/person LED load. Upon sensing the loss of the LED load, the module shall present a resistance of at least 250 k $\Omega$  across the hand/person input power leads within 300 msec. The LED light source will be said to have failed catastrophically if it fails to show any visible illumination when energized according to Section 5.2.1 after 75 msec.

##### 6.0 Quality Assurance

##### 6.1 General

6.1.1 Quality Assurance Program: Modules shall be manufactured in accordance with a vendor quality assurance (QA) program. The QA program shall include two types of quality assurance: (1) design quality assurance and (2) production quality assurance. The production quality assurance shall include statistically controlled routine tests to ensure minimum performance levels of modules built to meet this specification.

6.1.2 Record Keeping: QA processes and test results documentation shall be kept on file for a minimum period of seven years.

6.1.3 Conformance: Module designs not satisfying design qualification testing and the production quality assurance testing performance requirements in Sections 5.2 and 6.4 should not be labeled, advertised, or sold as conforming to this specification.

##### 6.2 Manufacturers' Serial Numbers

Each module shall be identified with the information specified in paragraph 6.2.1.

##### 6.3 Production Tests & Inspections

6.3.1 Production Test Requirements: All modules tendered for sale shall undergo the following Production Testing & Inspection prior to shipment. Failure of a module to meet the requirements of Production Testing & Inspection shall be cause for rejection. Test results shall be maintained per the requirement of Section 6.1.2.

6.3.1.1 All Production Tests shall be performed at an ambient temperature of 25°C (77°F) and at the nominal operating voltage of 120 VAC.

6.3.2 Production Luminance Test: Hand/Person icons shall be tested for maintained minimum luminance. Any

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measurement with a correlation to the luminance requirements of Section 4.1.1 may be used. Modules that do not meet the maintained minimum luminance requirements as per Section 4.1.1 shall be rejected.

**6.3.3 Power Factor:** Hand/Person icons shall be tested for power factor per the requirements of Section 5.5.1. A commercially available power factor meter may be used to perform this measurement. Failure of a module to meet the requirements for power factor (5.5.1) shall be cause for rejection of the module.

**6.3.4 Current Consumption Measurement:** Hand/Person icons shall be measured for current flow in Amperes. The measured current values shall be compared against the design current values from design qualification measurements in Section 6.4.2.1. A measured current consumption in excess of 120% of the design qualification current value for an ambient temperature of 25°C (77°F) shall be cause for rejection of the module.

**6.3.5 Visual Inspection:** All modules shall be visually inspected for any exterior physical damage or assembly anomalies. Careful attention shall be paid to the surface of the lens to ensure there are no scratches (abrasions), cracks, chips, discoloration, or other defects. The presence of any such defects shall be cause for rejection of the module.

#### 6.4 Design Qualification Testing

**6.4.1 Design Qualification testing** shall be performed on the hand/person icons of new module designs, and when a major design change has been implemented on existing hand/person pedestrian signal designs. Modules used in design qualification testing shall be representative of the manufacturer's proposed normal production.

**6.4.1.1** Testing shall be performed once every 5

years or when the module design or LED technology has been changed. Test data shall be retained by the module manufacturer in accordance with Section 6.1.2 or for all modules following final production of a specific design, whichever is longer.

**6.4.1.2** Six modules shall be used in Design Qualification Testing. All six modules shall be subjected to conditioning (6.4.2), followed by the Environmental Tests (6.4.3). Following the Environmental Tests, three modules shall undergo Photometric & Colorimetric Tests (6.4.4). The remaining three modules shall undergo the Electrical Tests (6.4.5) and Controller Compatibility Tests (6.4.5.11). Tests shall be conducted in the order described herein, unless otherwise specified.

**6.4.1.3** In order for a module design to be considered acceptable for marking with the label described in 3.6.3, all tested modules must comply with the acceptance/rejection criteria for the Environmental Tests (6.4.3), Photometric & Colorimetric Tests (6.4.4), Electrical Tests (6.4.5), and Controller Assembly Compatibility Tests (6.4.5.11).

**6.4.2 Conditioning:** Modules shall be energized for a minimum of 24 hours, at 100% duty cycle, in an ambient temperature of +50°C (+140°F).

#### 6.4.3 Environmental Testing:

**6.4.3.1 Mechanical Vibration Testing:** Three modules shall be tested per MIL-STD-883, Test Method 2007, using three 4-minute cycles along each x, y, and z axis, at a force of 2.5 Gs, with a frequency sweep from 2 Hz to 120 Hz.

**6.4.3.2 Temperature Cycling:** Temperature cycling shall be performed per MIL-STD-883, Test method 1010. The temperature range shall be per Section 3.3.1. A minimum of 20 cycles shall be performed with a 30-minute transfer time between temperature extremes and a 30-minute

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dwell time at each temperature. Modules under test shall be non-operating.

**6.4.3.3 Moisture Resistance:** Moisture resistance testing shall be performed on a sample of three modules per MIL-STD-810F, Procedure 1, Rain and Blowing Rain. The test shall be conducted on a stand-alone unit, without a protective housing. The rainfall rate shall be 1.7 mm/min (4 in/hr) and droplet size shall predominantly be between 0.5 mm and 4.5 mm. The module shall be rotated through 120 degrees and the duration of the test shall be 30 minutes. The module shall be energized throughout the test. The water shall be at 25°C. The wind velocity shall be 80 km/hr (50 mph). Any evidence of internal moisture into the module shall be cause for rejection.

**6.4.3.4 Hard Coat Test (Optional):** When applicable, a sample of three (3) modules shall be tested in accordance to the abrasion resistance test ASTM D1044. A weight of 500 grams shall be applied on a CS10F wheel for 150 cycles.

**6.4.3.5 UV Stabilization:** Documentation may be provided that clearly demonstrates that the external lens complies with the requirements of section 3.3.4.

**6.4.3.6 Environmental Tests Evaluation:** At the conclusion of the Environmental Tests, all the modules will be visually inspected for damage.

**6.4.3.7 Acceptance/Rejection Criteria:** The loosening of the lens, or any internal components, or evidence of other physical damage, such as cracking of the module lens or housing, or presence of internal moisture after testing shall be considered a failure for the proposed design.

**6.4.4 Photometric & Colorimetric Tests:** Two of the modules that were subjected to the Environmental Tests shall undergo

Photometric & Colorimetric Tests. Unless otherwise specified, these tests shall be performed with the modules energized at nominal operating voltage (120 VAC).

**6.4.4.1 Maintained Minimum Luminance:** The sample set shall be tested for maintained minimum luminance at both 25°C and 74°C. Prior to making measurements, each module shall be operated at a 100% duty cycle for a minimum of 90 minutes at the test temperature.

**6.4.4.2 For elevated temperature testing at 74°C,** the modules to be tested shall be mounted in a temperature-testing chamber so that the external surface of the emitting lens is outside the chamber and all portions behind the lens are within the chamber at a temperature of 74°C (165°F). The air temperature in front of the lens of the module shall be maintained at a minimum of 49°C (120°F) during the elevated temperature testing.

Measurements shall be made using a luminance meter located on the physical axis of the module lens at a distance such that the selected aperture samples a spot size of 12mm (0.5 inch) at the lens surface. The position of the luminance meter shall be translated from side to side and up and down, so as to sample nine points across the emitting surface of the module.

The luminance values for the nine points shall be recorded and the average value calculated.

Modules for which the calculated average value of luminance does not meet the requirements of Section 4.1.1 shall be rejected.

**6.4.4.3 Luminance Uniformity:** The sample set shall be tested in accordance with the requirements of Section 4.1.2, using the recorded values of luminance, at a testing

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temperature of 25°C. The highest and lowest values of luminance shall be recorded and compared. Modules not meeting requirements of Section 4.1.2 shall be rejected.

**6.4.4.3.1 Maximum Luminance:** The sample set shall be tested in accordance with the requirements of Section 4.1.2, using the recorded values of luminance, at testing temperatures of 25°C and 74°C. Modules for which the calculated average value of the luminance exceeds the limit established in Section 4.1.2, at either or both temperature levels, shall be rejected.

**6.4.4.4 Chromaticity:** From the sample set, two modules shall be measured for chromaticity per the requirements of Section 4.2. Prior to making measurements, each module shall be operated at a 100% duty cycle for a minimum of 60 minutes at +25°C (+77°F). Color measurements shall be made using a spectroradiometer with a maximum bandwidth of 4 nm, or a colorimeter that has a measurement uncertainty of less than 2.5% over the emission bandwidth of the icon under measurement.

Measurements shall be made by locating the instrument on the side normal to the emitting surface of the icon, at a distance such that the meter samples a spot size of 12mm (0.5 inch) at the lens surface. The position of the instrument shall be translated from side to side and up and down, so as to sample nine points across the emitting surface of the module.

The chromaticity coordinates of the emitted light at the nine points shall be recorded and the average value calculated. In addition, the dominant wavelengths for the nine sampled points of the hand icon shall be calculated and recorded.

Modules for which the calculated average chromaticity coordinates do not meet the

requirements of Section 4.2 shall be rejected.

**6.4.4.4.1 Color Uniformity:** The sample set shall be tested in accordance with the requirements of Section 4.2, using the recorded values of the chromaticity coordinates (emitting position—white icon) or the dominant wavelengths (hand—portland orange icon), from Section 6.4.4.4. Modules not meeting requirements of Section 4.2 shall be rejected.

**6.4.4.5 Photometric & Colorimetric Tests Evaluation:** At the conclusion of the Photometric & Colorimetric Tests, the measurement data shall be compared to the requirements of Sections 4.1, 4.2 and 4.3.

**6.4.4.5 Acceptance/Rejection Criteria:** The failure of any module to meet all of the requirements for maintained minimum luminance (4.1.1) and maximum permissible luminance (4.1.2) at 25°C and/or 74°C, and the requirements for luminance uniformity (4.1.2), chromaticity (4.2), and color uniformity (4.3) at 25°C, shall be considered a failure of the proposed design.

**6.4.5 Electrical.**

**6.4.5.1 Current Consumption:** The sample set shall be measured for current flow in Amperes. The measured current values shall be used for quality comparison of Production Quality Assurance current measurements on production modules.

**6.4.5.2 Temperature vs. Power Consumption:** The sample set shall be tested to measure the change in power consumption in Watts versus the change in temperature over the specified operating temperature range. This data shall be recorded and may be made available to all end users.



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**6.4.5.3 Power Consumption vs. Long-Term Life:** If the rated power consumption of the module at 25°C (77°F) and 74°C (165°F) will change more than 10% over time, the manufacturer may provide documentation showing the projected power consumption in Watts of the module over a period of 60 months from the date of installation. This documentation may include data for the following temperature points: 0°C (32°F), 25°C (77°F), 50°C (122°F) and 74°C (165°F).

**6.4.5.4 Power Factor (PF):** The sample set shall be measured for power factor per the requirements of Section 5.3.1. A commercially available power factor meter may be used to perform this measurement. The PF shall be calculated separately for each of the icons for the module.

**6.4.5.5 Total Harmonic Distortion (THD):** The sample set shall be measured for total harmonic distortion per the requirements of Section 5.5.2. A commercially available total harmonic distortion meter may be used to perform this measurement. The THD shall be measured for each of the icons for the module.

**6.4.5.6 Low Voltage Turn Off:** The sample set shall be measured to ensure compliance with the low voltage turn-off requirement of Section 5.2.4. To test for this condition each icon must first be fully illuminated at the nominal operating voltage. The applied voltage shall then be reduced to the point where there is no visible illumination. This point must be greater than 35 VAC RMS AC.

**6.4.5.7 Turn-On and Turn-Off Time:** The sample set shall be measured to ensure compliance with the turn-on and turn-off requirements of Section 5.2.5. The measurement shall be conducted using a two channel oscilloscope to measure the time delay between when the module is energized at 120 VAC RMS and when the

light output reaches 90% of full output. A photo-multiplier tube shall be used to measure the light output of the module. The same apparatus shall be used to measure the time delay between when the module is de-energized and when the light output reaches 0% of full output. The time in msec shall be plotted in the X axis and light output shall be plotted in the Y axis.

A module not reaching 90% nominal light output within 75 msec at start-up or still showing light output 75 msec after being de-energized shall be deemed to have failed this test.

**6.4.5.8 Electronic Noise:** From the sample set, a sample of 2 modules shall be tested. The modules shall be tested for conformance with the requirements of a Class A digital device, as specified in FCC Title 47, Subpart B, Section 15.103(b).

**6.4.5.9 Nondestruct. Transient Immunity:** The sample set shall be tested for transient immunity using the procedure described in Section 2.1.8, NEMA Standard TS 2-2003. Failure to meet these requirements shall be cause for rejection.

**6.4.5.10 Electrical Tests Evaluation:** At the conclusion of the Electrical Tests, the measurement data shall be compared to the requirements of Sections 5.2 through 5.7.

**6.4.5.10.1 Acceptance/Rejection Criteria:** The failure of any module to meet the applicable requirements of Sections 5.2 through 5.7 shall be considered a failure of the proposed design.

**6.4.5.11 Controller Assembly Compatibility:** Due to the low load current draw and high off-state impedance of modules, testing shall be performed to ensure the module design is compatible and operates properly with load current switches and conflict

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monitors in NEMA and Type 170 traffic signal control units.

Before performing the following tests, the manufacturer should ascertain which type of signal controller unit(s) the procuring traffic authority customer has in use and tailor these tests to meet the requirements of that type and model of controller unit(s).

**6.4.5.11.1 Load Switch Compatibility.** The sample set shall be tested for compatibility and proper operation with load current switches. Each module shall be connected to a variable ac voltage supply. The ac line current into the module shall be monitored for sufficient current draw to ensure proper load switch operation while the voltage is varied from 60 VAC RMS to 135 VAC RMS. Failure of the current draw to ensure proper load current switch operation shall be cause for rejection.

**6.4.5.11.2 Signal Conflict Monitor (MCM) Compatibility.** The sample set shall be tested for compatibility and proper operation with signal conflict monitors. Each module shall be operated from a 135 VAC RMS supply. A 19.5 k $\Omega$  resistor shall be wired in series in the hot line between the module and the ac power supply. A single-pole-single-throw switch shall be wired in parallel across the 19.5 k $\Omega$  resistor. A 220 k $\Omega$  shunt resistor shall be wired between the hot line connection and the neutral line connection on the module. Conflict monitor compatibility shall be tested by measuring the voltage decay across the 220 k $\Omega$  shunt resistor as follows: The single-pole-single-throw switch shall be closed, shorting out the 19.5 k $\Omega$  resistor, allowing the ac power supply to illuminate the module. Next the switch shall be opened, and the voltage across the 220 k $\Omega$  shunt resistor shall be measured for a decay to a value equal to or less than 10 VAC RMS within a time period equal to or less than 100 milliseconds. This test shall

be repeated a sufficient number of times to ensure that testing occurs at the peak of the ac line voltage cycle.

A voltage decay across the 220 k $\Omega$  shunt resistor to a value greater than 10 VAC RMS or a decay time to 10 VAC RMS greater than 100 milliseconds shall be cause for rejection.

**6.4.5.11.3 Controller Assembly Compatibility Evaluation:** At the conclusion of the Controller Assembly Compatibility Tests, the measurement data shall be compared to the requirements of the specific make and model Controller Assembly with which the module design is intended to operate.

**6.4.5.11.4 Acceptance/Rejection Criteria:** Failure of the module to draw sufficient current to ensure compatibility with the load current switches in the appropriate Controller Assembly (5.7) and/or failure of the circuit voltage to decay to a value equal to or less than 10VAC RMS within a time period equal to or less than 100 milliseconds (5.7) shall be considered a failure of the proposed design.

**6.4.5.12 Failed State Impedance Test:** The modules shall be tested for compliance with the requirement for provision of a failed-state impedance (5.7). The test is conducted in two parts: first the module is energized with the LED load disconnected from the power supply to establish the failed-state impedance. Next, the requirement for the failed state impedance is tested. The module shall be operated from a 120 VAC voltage supply.

a) Wire a 60 k $\Omega$  resistor in series with the hot line between the module and the AC power supply. A 100 k $\Omega$  shunt resistor shall be wired between the hot line connection and the neutral line connection on the module. A single-pole-

### SECTION 3 TECHNICAL SPECIFICATIONS

#### TRAFFIC POLES, MAST HEADS AND L.E.D. SIGNALS & HOUSINGS

#### GROUP B

#### Appendix B

#### Specification

single-throw switch shall be wired in parallel with the 50 k $\Omega$  resistor. With the switch in the closed position and the LED load disconnected from the module power supply, energize the module for 300ms to establish the failed state impedance (5.7).

- b) The second part of the failed state impedance test is conducted to insure that the appropriate failed state impedance is established. The switch is opened and the circuit is energized by the 120VAC voltage supply. The voltage across the 100 k $\Omega$  shunt resistor shall be continuously monitored. The voltage shall decay to a value equal to or greater than 70 VAC RMS. For the continuous interval of 500 ms through 1500 ms, after energizing the circuit with an open switch, the measured voltage shall be 70 VAC RMS or greater. The second part of the test shall be repeated 10 times, with the minimum voltage recorded during the continuous interval of 500 ms through 1500 ms, after energizing the circuit with an open switch, recorded as the final test value.

**6.4.5.12.1 Failed State Impedance Test Evaluation:** At the conclusion of the Failed State Impedance Test, the measurement data shall be compared to the requirement of Section 5.7.

**6.4.5.12.2 Acceptance/Rejection Criteria:** Failure of the voltage across the 100 k $\Omega$  shunt resistor to remain at a value equal to or greater than 70 VAC RMS for the continuous time interval of 500 ms through

1500ms, after energizing the circuit with an open switch, shall be considered a failure and rejection of design.

#### 7.0 Warranty

7.1 Manufacturers shall provide a written warranty issued by the factory located

in the NAFTA country of module origin with the following minimum provisions:

7.2 Modules shall be replaced, repaired or purchase value refunded if the module fails to function as intended due to workmanship or material defects within the first sixty (60) months from the date of delivery.

7.3 Modules which exhibit luminous intensity less than the minimum specified values within the first sixty (60) months of the date of delivery shall be replaced, repaired or purchase value refunded.

7.4 Upon request, the LED production module Manufacturer shall provide written documentation of its ability to satisfy a worst-case, catastrophic warranty claim. A current corporate annual report duly-certified by an independent auditing firm, containing financial statements illustrating sufficient cash-on-hand and net worth to satisfy a worst-case, catastrophic warranty claim is an example of suitable documentation. The documentation shall clearly disclose:

a) The country in which the factory of module origin is located.

b) The name of the company or organization that owns the factory of module origin including any and all of its parent companies and/or organizations, and their respective country of corporate citizenship

c) For firms with business and/or corporate citizenship in the United States of less than seven years, the process by which the end-users/owners of the modules will be able to obtain worst-case, catastrophic warranty service in the event of bankruptcy or cessation-of-operations by the firm supplying the modules within North America, or in the event of bankruptcy or

**SECTION 3**  
**TECHNICAL SPECIFICATIONS**

**TRAFFIC POLES, MAST HEADS AND L.E.D. SIGNALS & HOUSINGS**

**GROUP B**

**Appendix B**

**Specification**

cessation-of-operations by the owner of the factory of origin, shall be clearly disclosed.

**8.0 Housing** (When modules specified complete with Housing)

**8.1** The maximum overall dimensions of the signal head shall be 18-1/2 inches wide, 18-3/4 inches high including latch/lugs and 6 inches deep, including the sunshield.

**8.2** The housing shall be a one (1) piece corrosion resistant aluminum alloy die-casting complete with integrally cast top, bottom, sides and back. Four (4) integrally cast hinge lug pairs, two (2) at the top and two (2) at the bottom of each case, shall be provided for operation of a swing down door.

**8.3** The housing for pedestrian signals shall be dustproof, weatherproof and corrosion resistant and shall provide for easy access to and replacement of all components.

**8.4** The housing shall have openings at the top and bottom to accommodate standard Department approved traffic signal mounting brackets. The top and bottom openings of the housing shall have a traffic signal industry standard Shurlock boss. The teeth shall be clean and sharp, to provide full engagement with the mounting brackets. The radial angular grooves of the Shurlock boss when used with the Shurlock fittings shall provide total positive positioning of the entire signal head to eliminate rotation or misalignment of the head.

**8.0 Door Frame and Visor** (When modules specified complete with Housing)

**8.1** The door frame shall be a one (1) piece corrosion resistant aluminum alloy die-casting, complete with two (2) hinge lugs cast at the bottom and two (2) latch slots cast at the top of the door. The door shall be attached to the housing by means of two (2) Type 304 stainless steel spring pins. Two (2) stainless steel hinged bolts with captive stainless steel wing nuts and washers shall be attached to the housing with the use of stainless steel spring pins. Therefore, latching and unlatching of the door shall require no tools.

**8.2** The signal head shall be provided with a Z-crate type or Department approved equivalent type visor (sunshield) designed to eliminate sun phantom.

**8.3** The Z-crate type sunshield shall be installed parallel to the face of the Hand/Person symbol message and Countdown. The Z-crate sunshield assembly shall be held in place by the use of stainless steel screws.

**8.4** The Z-crate type sunshield assembly shall consist of horizontal louvers formed in a zigzag pattern or a Department approved pattern.

**8.5** The basic material used in construction of the visor shall be nominally 0.030 thick and shall be one-hundred percent (100%) impregnated black polycarbonate plastic processed with a flat finish on both sides.

**8.6** The assembly shall be enclosed in a mounting frame constructed of 0.040 minimum thickness aluminum or polycarbonate plastic. This frame shall be 1-1/2 inches deep and shall contain

SECTION 3  
TECHNICAL SPECIFICATIONS

TRAFFIC POLES, MAST HEADS AND L.E.D. SIGNALS & HOUSINGS

GROUP B

Appendix B

Specification

mounting holes for direct insertion in the pedestrian signal doorframe.

8.7 When installed in front of the Hand/Person signal messages and Countdown, when illustrated, the visor (sunshield) shall not obscure or modify the clear recognition of a "Hand", "Walking Person" symbols and numerical numbers displayed in the Countdown to a pedestrian facing the signal head at zero degrees (0°) horizontal, when viewed installed, at a height between 7 to 10 feet

vertically above the sidewalk from a distance between fifteen feet (15') and one hundred-twenty feet (120').

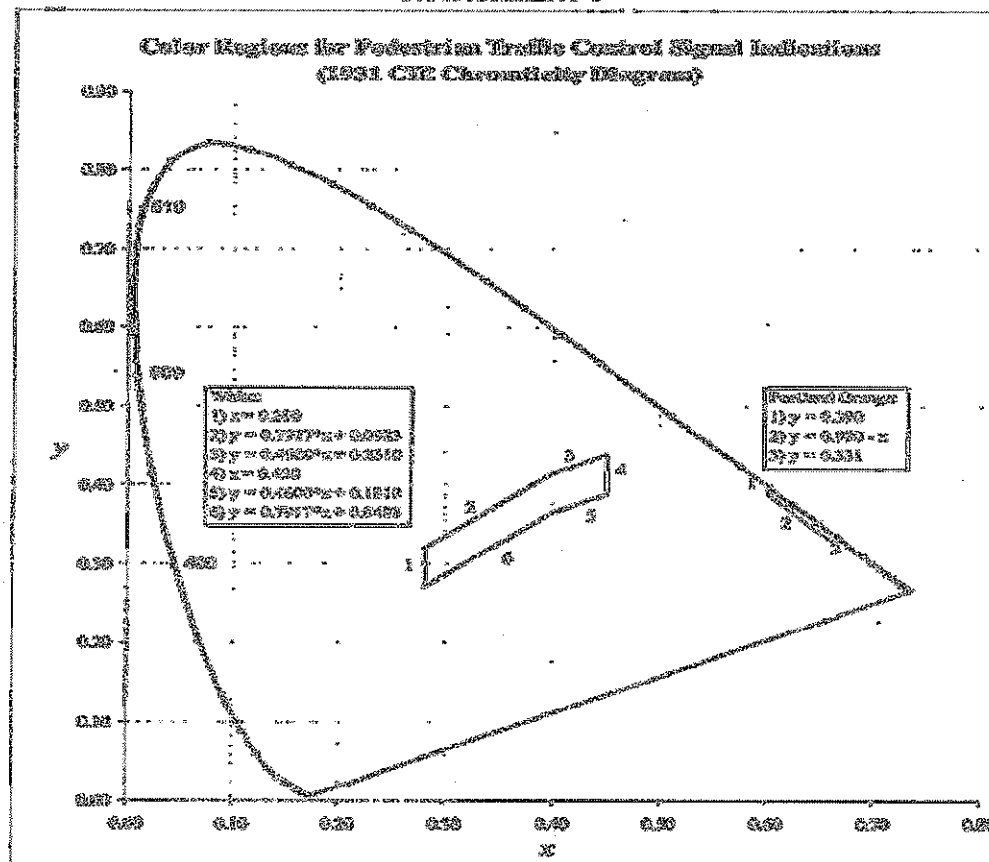
SECTION 3  
TECHNICAL SPECIFICATIONS

TRAFFIC POLES, MAST HEADS AND L.E.D. SIGNALS & HOUSINGS

GROUP-B

Attachment for Appendix B

ATTACHMENT 1



LED Pedestrian Countdown Module TS 08-15-07.doc

**SECTION 4****Traffic Poles, Mast Heads, and L.E.D. Signals**

**Submit Bid To:**  
**CLERK OF THE BOARD**  
Stephen P. Clark Center  
111 NW 1<sup>st</sup> Street  
17<sup>th</sup> Floor, Suite 202  
Miami, Florida 33128-1983

**OPENING: 2:00 P.M.**

**Wednesday**  
**October 17, 2012**



**PLEASE QUOTE PRICES F.O.B. DESTINATION, FREIGHT ALLOWED, LESS TAXES,  
DELIVERED IN MIAMI-DADE COUNTY, FLORIDA.**

NOTE: Miami-Dade County is exempt from all taxes (Federal, State, Local). Bid price should be less all taxes. Tax Exemption Certificate furnished upon request.

Issued  
by: **MH**

ISD/PM

Date Issued:  
**October 3, 2012**

This Bid Submittal Consists of  
Pages **64** thru **71+Affidavits**

Sealed bids subject to the Terms and Conditions of this Invitation to Bid and the accompanying Bid Submittal. Such other contract provisions, specifications, drawings or other data as are attached or incorporated by reference in the Bid Submittal, will be received at the office of the Clerk of the Board at the address shown above until the above stated time and date, and at that time, publicly opened for furnishing the supplies or services described in the accompanying Bid Submittal Requirement.

**Title:**

Traffic Poles, Mast Heads, and L.E.D. Signals & Housings

A Bid Deposit in the amount of **N/A** of the total amount of the bid shall accompany all bids.

A Performance Bond in the amount of **N/A** of the total amount of the bid will be required upon execution of the contract by the successful awarded bidder and Miami-Dade County.

**DO NOT WRITE IN THIS SPACE**

ACCEPTED \_\_\_\_\_ HIGHER THAN LOW \_\_\_\_\_  
NON-RESPONSIVE \_\_\_\_\_ NON-RESPONSIBLE \_\_\_\_\_

DATE B.C.C. \_\_\_\_\_ NO BID \_\_\_\_\_

ITEM NOS. ACCEPTED \_\_\_\_\_

COMMODITY CODE: **550-85,550-80,285-76,570-  
58,968-80, 550-88,550-81 and  
550-89**

Procurement Contracting Associate **Mary Hammett**

FIRM NAME \_\_\_\_\_

**RETURN ONE ORIGINAL AND TWO COPIES OF BID SUBMITTAL PAGES AND AFFIDAVITS.**

**FAILURE TO COMPLETE THE CERTIFICATION REGARDING LOCAL PREFERENCE ON THE BID SUBMITTAL FORM IN SECTION 4 WILL RENDER THE AWARDED BIDDER INELIGIBLE FOR LOCAL PREFERENCE.**

**FAILURE TO SIGN THE BID SUBMITTAL FORM IN SECTION 4 WILL RENDER YOUR BID NON-RESPONSIVE.**

**SECTION 4****Traffic Poles, Mast Heads, and L.E.D. Signals****Group A : Traffic Signal Poles, Mast Arms, and Street Light Poles**

As Identified In Group A Specification Drawings

Item:	Est. Quantity:	Description:	Unit Price:
1	1,150	Traffic Signals Poles- 18" bolt Circle with anchor bolts & nuts and other applicable hardware	\$_____ Each
		Manufacturer Bid: _____	
		Model# Bid: _____	
2	250	Traffic Signals Poles-22" bolt Circle with anchor bolts & nuts and other applicable hardware	\$_____ Each
		Manufacturer Bid: _____	
		Model# Bid: _____	
3	100	Traffic Signal Mast Arms-64' with applicable hardware	\$_____ Each
		Manufacturer Bid: _____	
		Model# Bid: _____	
4	150	Traffic Signal Mast Arms-54' with applicable hardware	\$_____ Each
		Manufacturer Bid: _____	
		Model# Bid: _____	
5	500 Each	Traffic Signal Mast Arms-48' with applicable hardware	\$_____ Each
		Manufacturer Bid: _____	
		Model# Bid: _____	
6	500 Each	Traffic Signal Mast Heads-36' with applicable hardware	\$_____ Each
		Manufacturer Bid: _____	
		Model# Bid: _____	



**SECTION 4****Traffic Poles, Mast Heads, and L.E.D. Signals**

7	150	Traffic Signal Mast Heads-28' with applicable hardware	\$_____ Each
		Manufacturer Bid: _____	
		Model# Bid: _____	
8	500	Street Light Poles-13" bolt Circle detail as shown on page 21 of the bid package with anchor bolts & nuts and other applicable hardware	\$_____ Each
		Manufacturer Bid: _____	
		Model# Bid: _____	
9	125	Decorative Street Light Poles-bolt circle detail as shown on page 20 of the bid package with anchor bolts & nuts and other applicable hardware	\$_____ Each
		Manufacturer Bid: _____	
		Model# Bid: _____	
10	125 Each	Decorative Street Light Poles-details as shown on page 22 of the bid package with anchor bolts & nuts and other applicable hardware	\$_____ Each
		Manufacturer Bid: _____	
		Model# Bid: _____	
11	25	Decorative Street Light Poles-detail as shown on page 23 of the bid package with anchor bolts & nuts and other applicable hardware	\$_____ Each
		Manufacturer Bid: _____	
		Model# Bid: _____	

**SECTION 4****Traffic Poles, Mast Heads, and L.E.D. Signals****Group B: L.E.D. Pedestrian Signals & Housing**

As Identified In L.E.D. Pedestrian Signal Hand/Person Module

Item:	Est. Quantity:	Description:	Unit Price:
1	1500	L.E.D. Hand/Person Signal Modules Only Dialight Model #430-6473-001 or Approved Equal	\$ _____ Each
		Model# _____	
2	750	L.E.D. Hand/Person Signal Modules Dialight Model #430-6473- 001Complete with Housing or Approved Equal	\$ _____ Each
		Model# _____	
3	2,500	L.E.D. Countdown Signals Modules Only Dialight Model #430-6479-001F or Approved Equal	\$ _____ Each
		Model# _____	
4	750	L.E. D Countdown Signals Modules Dialight Model #430-6479-001F or Approved Equal	\$ _____ Each
		Model# _____	

**SECTION 4**

**Traffic Poles, Mast Heads, and L.E.D. Signals**

In accordance to Section 2 Paragraph 2.25, requires the submission of the information sheets on all items.

Did your Company attached information sheets? Yes ☐ No ☐

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In accordance to Section 3 Paragraph 3.1.14 Street Light Poles Minimum Requirement

These Street Light Poles must meet the standard specification provided on the attached plans. Any deviation will not be accepted unless authorized in writing by the Miami-Dade County Public Works and Waste Management Department, Street Light Coordinator.

Does your Company meet the above requirement? Yes ☐ No ☐

MIAMI-DADE COUNTY

BID NO.: 9695-0/18

SECTION 4  
BID SUBMITTAL FOR:

Traffic Poles, Mast Heads, and L.E.D. Signals & Housings

ACKNOWLEDGEMENT OF ADDENDA

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INSTRUCTIONS: COMPLETE PART I OR PART II, WHICHEVER APPLIES

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PART I:

LIST BELOW ARE THE DATES OF ISSUE FOR EACH ADDENDUM RECEIVED IN  
CONNECTION WITH THIS BID

Addendum #1, Dated \_\_\_\_\_  
Addendum #2, Dated \_\_\_\_\_  
Addendum #3, Dated \_\_\_\_\_  
Addendum #4, Dated \_\_\_\_\_  
Addendum #5, Dated \_\_\_\_\_  
Addendum #6, Dated \_\_\_\_\_  
Addendum #7, Dated \_\_\_\_\_  
Addendum #8, Dated \_\_\_\_\_

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PART II:

☐ NO ADDENDUM WAS RECEIVED IN CONNECTION WITH THIS BID

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FIRM NAME: \_\_\_\_\_

AUTHORIZED SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

TITLE OF OFFICER: \_\_\_\_\_

**Bid Title: Traffic Poles, Mast Heads, and L.E.D. Signals & Housings**

By signing this Bid Submittal Form the Awarded bidder certifies that it satisfies all legal requirements (as an entity) to do business with the County, including all Conflict of Interest and Code of Ethics provisions in Section 2-11 of the Miami-Dade County Code. Any County employee or member of his or her immediate family seeking to contract with the County shall seek a conflict of interest opinion from the Miami-Dade County Ethics Commission prior to submittal of a Bid response or application of any type to contract with the County by the employee or his or her immediate family and file a copy of that request for opinion and any opinion or waiver from the Board of County Commissioners with the Clerk of the Board. The affected employee shall file with the Clerk of the Board a statement in a form satisfactory to the Clerk disclosing the employee's interest or the interest of his or her immediate family in the proposed contract and the nature of the intended contract at the same time as or before submitting a Bid, response, or application of any type to contract with the County. Also a copy of the request for a conflict of interest opinion from the Ethics Commission and any corresponding opinion, or any waiver issued by the Board of County Commissioners, must be submitted with the response to the solicitation.

In accordance with Sec. 2-11.1(s) of the County Code as amended, prior to conducting any lobbying regarding this solicitation, the Awarded bidder must file the appropriate form with the Clerk of the Board stating that a particular lobbyist is authorized to represent the Awarded bidder. Failure to file the appropriate form in relation to each solicitation may be considered as evidence that the Awarded bidder is not a responsible contractor.

The Awarded bidder confirms that this Bid is made without prior understanding, agreement, or connection with any corporation, firm, or person submitting a Bid for the same goods and/or services and in all respects is without collusion, and that the Awarded bidder will accept any resultant award. Further, the undersigned acknowledges that award of a contract is contingent upon awarded bidder registration. Failure to register as a awarded bidder within the specified time may result in your firm not being considered for award.

Pursuant to Miami-Dade County Ordinance 94-34, any individual, corporation, partnership, joint venture or other legal entity having an officer, director, or executive who has been convicted of a felony during the past ten (10) years shall disclose this information at the time of bid or proposal submission.

☐ Place a check mark here only if awarded bidder has such conviction to disclose.

By executing this proposal through a duly authorized representative, the proposer certifies that the proposer is not on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, as those terms are used and defined in sections 287.135 and 215.473 of the Florida Statutes. In the event that the proposer is unable to provide such certification but still seeks to be considered for award of this solicitation, the proposer shall execute the proposal through a duly authorized representative and shall also initial this space: \_\_\_\_\_. In such event, the proposer shall furnish together with its proposal a duly executed written explanation of the facts supporting any exception to the requirement for certification that it claims under Section 287.135 of the Florida Statutes. The proposer agrees to cooperate fully with the County in any investigation undertaken by the County to determine whether the claimed exception would be applicable. The County shall have the right to terminate any contract resulting from this solicitation for default if the proposer is found to have submitted a false certification or to have been placed on the Scrutinized Companies for Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List.

**LOCAL PREFERENCE CERTIFICATION:** For the purpose of this certification, a "local business" is a business located within the limits of Miami-Dade County (or Broward County in accordance with the Interlocal Agreement between the two counties) that conforms with the provisions of Section 1.10 of the General Terms and Conditions of this solicitation and contributes to the economic development of the community in a verifiable and measurable way. This may include, but not be limited to, the retention and expansion of employment opportunities and the support and increase to the County's tax base.

☐ Place a check mark here only if affirming awarded bidder meets requirements for Local Preference. Failure to complete this certification at this time (by checking the box above) shall render the awarded bidder ineligible for Local Preference.

**LOCAL CERTIFIED SERVICE-DISABLED VETERAN BUSINESS ENTERPRISE CERTIFICATION:** A Local Certified Service-Disabled Veteran Business Enterprise is a firm that is (a) a local business pursuant to Section 2-8.5 of the Code of Miami-Dade County and (b) prior to bid submission is certified by the State of Florida Department of Management Services as a service-disabled veteran business enterprise pursuant to Section 295.187 of the Florida Statutes.

☐ Place a check mark here only if affirming awarded bidder is a Local Certified Service-Disabled Veteran Business Enterprise. A copy of the certification must be submitted with this proposal.

**COUNTY USER ACCESS PROGRAM (UAP): Joint purchase and entity revenue sharing program**

For the County's information, the awarded bidder is requested to indicate, at 'A' and 'B' below, its general interest in participating in the Joint Purchase Program of the County User Access Program (UAP) described in Section 2.21 of this contract solicitation, if that section is present in this solicitation document. Awarded bidder participation in the Joint Purchase portion of the UAP is voluntary, and the awarded bidder's expression of general interest at 'A' and 'B' below is for the County's information only and shall not be binding on the awarded bidder.

- A. If awarded this County contract, would you be interest in participating in the Joint Purchase portion of the UAP with respect to other governmental, quasi-governmental or not-for-profit entities located within the geographical boundaries of Miami-Dade County?

Yes \_\_\_\_\_ No \_\_\_\_\_



- B. If awarded this County contract, would you be interested in participating in the Joint Purchase portion of the UAP with respect to other governmental, quasi-governmental or not-for-profit entities located outside the geographical boundaries of Miami-Dade County?

Yes \_\_\_\_\_ No \_\_\_\_\_

Firm Name: \_\_\_\_\_

Street Address: \_\_\_\_\_

Mailing Address (if different): \_\_\_\_\_

Telephone No.: \_\_\_\_\_ Fax No.: \_\_\_\_\_

Email Address: \_\_\_\_\_ FEIN No. \_\_\_\_/\_\_\_\_/\_\_\_\_/\_\_\_\_/\_\_\_\_/\_\_\_\_

Prompt Payment Terms: \_\_\_\_\_% \_\_\_\_\_ days net \_\_\_\_\_ days (Please see paragraph 1.2 H of General Terms and Conditions)

Signature: \_\_\_\_\_ (Signature of authorized agent)  
 \*\*By signing this document the awarded bidder agrees to all Terms and Conditions of this Solicitation and the resulting Contract."

Print Name: \_\_\_\_\_ Title: \_\_\_\_\_

THE EXECUTION OF THIS FORM CONSTITUTES THE UNEQUIVOCAL OFFER OF PROPOSER TO BE BOUND BY THE TERMS OF ITS PROPOSAL. FAILURE TO SIGN THIS SOLICITATION WHERE INDICATED ABOVE BY AN AUTHORIZED REPRESENTATIVE SHALL RENDER THE PROPOSAL NON-RESPONSIVE. THE COUNTY MAY, HOWEVER, IN ITS SOLE DISCRETION, ACCEPT ANY PROPOSAL THAT INCLUDES AN EXECUTED DOCUMENT WHICH UNEQUIVOCALLY BINDS THE PROPOSER TO THE TERMS OF ITS OFFER.



# **APPENDIX**

## **AFFIDAVITS FORMAL BIDS**

**MIAMI-DADE  
COUNTY**

**Miami-Dade County  
Internal Services Department  
Procurement Management Division  
Affirmation of Vendor Affidavits**

**Federal Employer**

**Identification Number (FEIN):**

### **Affidavits and Legislation/ Governing Body**

1.	<b>Miami-Dade County Ownership Disclosure</b> Sec. 2-8.1 of the County Code	6.	<b>Miami-Dade County Vendor Obligation to County</b> Section 2-8.1 of the County Code
2.	<b>Miami-Dade County Employment Disclosure</b> County Ordinance No. 90-133, amending Section 2-8.1(d)(2) of the County Code	7.	<b>Miami-Dade County Code of Business Ethics</b> Article 1, Section 2-8.1(f) and 2-11(b)(1) of the County Code through (d) and (g) of the County Code and County Ordinance No 00-1 amending Section 2-11.1(c) of the County Code
3.	<b>Miami-Dade County Employment Drug-free Workplace Certification</b> Section 2-8.1.2(b) of the County Code	8.	<b>Miami-Dade County Family Leave</b> Article V of Chapter 11 of the County Code
4.	<b>Miami-Dade County Disability Non-Discrimination</b> Article 1, Section 2-8.1.5 Resolution R182-00 amending R-385-95	9.	<b>Miami-Dade County Living Wage</b> Section 2-8.9 of the County Code
5.	<b>Miami-Dade County Debarment Disclosure</b> Section 10.38 of the County Code	10.	<b>Miami-Dade County Domestic Leave and Reporting</b> Article 8, Section 11A-60 11A-67 of the County Code

Printed Name of Affiant	Printed Title of Affiant	Signature of Affiant
Name of Firm		Date
Address of Firm	State	Zip Code

Notary Public - State of \_\_\_\_\_ County of \_\_\_\_\_

Subscribed and sworn to (or affirmed) before me this \_\_\_\_\_ day of, \_\_\_\_\_, 20\_\_\_\_.

by \_\_\_\_\_ He or she is personally known to me ☐ or has produced identification ☐

Type of identification produced \_\_\_\_\_

Signature of Notary Public		Serial Number
Print or Stamp of Notary Public	Expiration Date	Notary Public Seal



**BID NO.: 9695-0/18**

In compliance with Miami-Dade County Ordinance 97-35, the Bidder shall submit with the bid proposal a detailed statement of its policies and procedures (use separate sheet if necessary) for awarding subcontractors in accordance with Section 1, Paragraph 1.15

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Signature \_\_\_\_\_

Date \_\_\_\_\_

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[illegible]

I certify that the representations contained in this Subcontractor/Supplier listing are to the best of my knowledge true and accurate.

Date: